THE ROLE OF ORGANISATIONAL CHANGE MANAGEMENT IN OFFSHORE OUTSOURCING OF INFORMATION TECHNOLOGY SERVICES: QUALITATIVE CASE STUDIES FROM A MULTINATIONAL PHARMACEUTICAL COMPANY

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ABSTRACT

This research study seeks to understand the nature of organisational change with respect to offshore outsourcing of information technology services in a multinational pharmaceutical company, and to examine the effectiveness of approaches used to manage this change so that lessons may be drawn from these experiences. Despite the abundant literature on effective organisational change management, the key factors that need to be managed properly at different stages of the offshore outsourcing process are not well understood. The research adopts a processual view to paint a broad picture of the issues involved in these different stages. A generic process model of change, based on the review of the change literature, was first developed to represent how change was intended to occur. This model focuses on the following four stages in the change process: context, diagnosis and planning, implementation, and institutionalisation.

The research employs an interpretive case study approach and draws on fieldwork from three independent information systems departments (cases) of the company, where offshore outsourcing programmes were implemented. Qualitative data from semi-structured interviews, direct observation and document analysis are analysed by applying the generic process model to produce a detailed account of the way in which change was managed in the case organisations.

The findings reveal that a combination of contextual factors, both external and internal to the company, influenced the adoption and use of offshore outsourcing in the case organisations. Externally, the economic forces were found to be the main catalyst for the change, while internally the role of the executive leadership and the lack of internal resources further explain the motivations behind the adoption of offshore outsourcing. The study illustrates that achieving successful outcomes from offshore outsourcing activities critically depends on the organisation adequately addressing a number of factors, such as conveying a sense of urgency, developing and communicating the vision, identifying the benefits of change and how they will be delivered, generating short-term wins, providing education and training, developing a fit between the change and organisational culture, etc., throughout the change process. The findings also highlight the effects of offshore outsourcing on the case organisations, including change in job roles and responsibilities and organisational learning activities that enable corrective actions to

improve change management efforts. An important contribution of this research is the development of a model providing a more comprehensive understanding of the change process associated with the implementation of offshore IT outsourcing.

Recommendations for policy makers and change managers to improve change management practice based on the research findings, as well as recommendations for further research, form a significant part of the conclusions.

Key words: Organisational change; offshore IT outsourcing; interpretive case study; qualitative research methods; pharmaceutical industry

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1. INTRODUCTION

1.1. BACKGROUND TO THE RESEARCH

The pharmaceutical industry is undergoing transformation due to a combination of economic, legal, political, technological, social, and competitive forces. These forces have not only impacted the industry's bottom-line in recent years, they also have helped redefine the dynamics of this industry (Piachaud, 2002). The drivers of this rapid change have included: declining stock prices following the general economic downturn and dot-com crash in 2000, legislative proposals to re-import drugs from Canada and elsewhere to curb the rising costs of prescription drugs, a proposal (McCain-Schumer bill) to reform the Hatch-Waxman Act to limit patent protection, Medicare and state-level reform proposals aimed at curtailing the price of prescription drugs (e.g. Maine Rx Programme), rising research and development (R&D) costs, thin product pipelines resulting from declining R&D productivity, product failures in late-stage development and in the market place, expiring patents, competition from generic drug makers, and curbs on healthcare spending in many countries.

The industry is facing unrelenting financial pressures and the above problems are preventing it from delivering growth of more than 5.3 percent compound annual growth rate (CAGR) in the immediate future, which is significantly lower than the 9 percent predicted earlier by some analysts and certainly well below the double-digit growth the industry experienced during the 1990s (Arlington, Barnett, Hughes and Palo, 2002).

Under these circumstances, pharmaceutical companies are currently faced with two major challenges to generating long-term growth: controlling costs, and improving R&D productivity. Such a state of the industry has led many companies to embrace outsourcing as a strategy to control costs and improve performance. The industry's interest in embracing offshore outsourcing particularly stems from lower labour costs for information technology (IT) services and access to large populations in countries such as India for clinical trial subjects (Miller, 2003).

PharmaCom (pseudonym for the company selected for this research study), a global pharmaceutical company with access to worldwide resources and markets, is not insulated from any of the pressures previously described. In 2003, in order to address these challenges, the executive leadership at PharmaCom (2003a) 'endorsed a set of individual

company-wide [change] initiatives aimed at improving the quality of their processes and business, focusing on value-adding activities, eliminating inefficiencies and freeing up resources to fund their future'. One such change initiative that was actively explored was the offshore outsourcing of IT services in the information systems departments of the various business units of the company.

Ackerman-Anderson and Anderson (2001) observe that organisations have poor track records of managing change and most often these initiatives fail to deliver the intended business results. They add that large-scale change efforts such as re-engineering and IT implementations are consuming vast amounts of budget, time, and resources without yielding the anticipated return on the investment, thus placing the customer base and faith in leadership at risk. Consequently, 'these failed efforts are causing tremendous resistance and burnout in people, loss of employee morale, and turmoil in the cultures of organisations' (Ackerman-Anderson and Anderson, 2001, p.2).

Against this background, this research study aims to understand the nature of organisational change with respect to offshore outsourcing of IT services in PharmaCom's different information systems departments and examines the effectiveness of the approaches used to manage this change drawing lessons from these experiences.

1.2. RESEARCH PROBLEM

The recent emergence of globalised, resourcing strategies by IT and other business functions, which has become known as 'offshore outsourcing', represents a major change for firms operating in the USA and other Western countries. Basically, 'the potential to utilise the resources of developing, low-cost economies to substitute service delivery from developed, high-cost countries is the core of services globalisation' (NeoIT, 2005a, p.1). There are several organisational components in this change phenomenon such as people, process, and knowledge that need to be managed carefully to avoid any detrimental effects on the organisation and the business. These negative effects can include loss of employee morale, decline in customer satisfaction, business continuity problems, among other issues. If not managed carefully, the offshore outsourcing strategy may not yield the intended cost savings or provide enhanced organisational efficiencies. Moreover, employee resistance to offshore outsourcing, which stems from a perceived fear of job loss, may result in the depletion of long-term competitiveness of companies.

DECLARATION

I declare that the work contained in this thesis has not been submitted for any other award and that it is all my own work. The work is the result of my own original work carried out in a multinational pharmaceutical company in the USA.

The findings of this study (chapter 6) have been presented at the 15th Annual Multi-Organisational Partnerships, Alliances and Networks International (MOPAN) Conference held in Boston during June 2008. An abstract of the paper titled *The role of organisational change management in offshore outsourcing of IT services: qualitative case studies from a multinational pharmaceutical company* appears in the conference proceedings. These findings have also been presented during the Academy of Management Annual Meeting, which took place in August 2008 in Ahaheim, California. The abstract of the conference paper is published in the proceedings under the title *Processual view of managing change related to offshore IT outsourcing implementation.*

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1.2.1. Research Approach

Due to the relative newness of the offshore outsourcing phenomenon, the amount of literature concerning how change related to the offshoring process is managed within organisations is limited. Although there is a vast amount of literature on the general topic of organisational change management, the key factors that need to be managed properly at different stages of offshore outsourcing are not well understood. The approach taken by this study is intended to increase understanding of these factors. A processual view of change allows a broad picture to be painted of the issues involved in the different stages of the offshoring lifecycle. This view is important both to increase the information available to decision makers and change practitioners and to provide a useful framework to change researchers for conducting further research and analysis of these issues.

1.3. RESEARCH AIMS AND OBJECTIVES

The primary aim of this research study is to understand the nature of organisational change associated with offshore outsourcing of IT services and to examine the effectiveness of approaches used to manage this change so that lessons may be drawn from these experiences.

The fundamental research question posed by this study is: *how do IT organisations manage change associated with offshore outsourcing of information technology services and what lessons can be learned from their experiences*? By studying the processes through which IT organisations plan and implement change, we can enable them to manage change more effectively. The case organisations identified for data collection are the information systems departments of the different business units of PharmaCom.

1.3.1. Objectives

The following objectives assist in achieving the primary aim of this research study:

1) To explore the environmental forces (internal and external) that either foster or hinder the adoption and use of offshore outsourcing.

2) To identify the organisational factors that either contribute to or prevent successful change management.

3) To understand the effects of offshore outsourcing.

4) To contribute to a better understanding of the problems and possible solutions related to managing change for offshore outsourcing with a view to improve professional practice.

The first objective of this study seeks to explore both internal and external pressures that influence the current change proposition. In so doing, the context of change, that is, the complexities of the business environment (both historical and current) that have shaped the change programme can be better understood.

The second objective involves the analysis of the plans employed for managing change and the actions related to their implementation in the context of critical organisational factors. Current research suggests that various organisational factors can influence success at organisational change. To identify these factors, the author conducted an analysis of the change management literature, including journal articles and books. Based on the analysis, the author grouped the factors into six essential areas or themes:

- The vision for change,
- Change implementation strategy,
- Change leadership,
- Communication,
- Education and training, and
- Organisational culture change.

These are organisational factors that must be addressed during the various stages of the change process for a change effort to succeed (Hayes, 2002; Kotter, 1998; Jick, 1991). Thus, an analysis of the above factors provides for a deeper understanding of the extent to which the change is organised or not organised for effective task performance.

The third objective aims to understand the effects of offshore outsourcing, as perceived by the employees who participated in this change. As the company reacts to environmental pressures and attempts to transform itself, the effects of the changing environment and new behaviours can be realised at the micro level within the

organisation. An analysis of these change effects can provide valuable insights into how this change was perceived 'on the ground', that is by those who actually carried out the operational tasks.

These objectives together will allow the critical aspects of the change process to be brought together and examined according to the published generic process models of change, thus enabling the confirmation of current practices and a justification for improvements to those practices.

1.4. JUSTIFICATION FOR THE RESEARCH

The original interest in this topic arose when the author was enrolled in a postgraduate course on management of organisational change in The Wharton School of the University of Pennsylvania in Autumn 2003. As part of a project for this class, the author and three fellow students conducted a preliminary investigation of how PharmaCom planned to implement its offshore IT outsourcing strategy. The study project briefly examined the potential consequences of change for employees at PharmaCom using prescriptive theory. For the author, this study project represented limitations associated with applying contingency models to understand complex change processes, and highlighted the need for a more extensive study to develop a holistic understanding of the change process which is necessary to guide practitioners to achieve positive organisational outcomes.

Thus, the goal of this research study is to make important contributions in several areas. First, it will contribute to change research by generating an in-depth understanding of the changes associated with planning and implementing offshore IT outsourcing initiatives. Second, it will add substantive content to our understanding of: the context; the roles played by employees at various managerial levels; and the processes through which organisations plan and implement offshore IT outsourcing activities. At present, such an understanding is absent in both change research and in change management practice.

Finally, decision makers, change managers and change consultants will be able use the results of this study as well as its insights to enhance the planning and implementation of offshore IT outsourcing programmes.

1.5. METHODOLOGY

The social constructionist paradigm, and particularly interpretive assumptions, provides the philosophical basis for the research design of this study to understand the nature of organisational change related to offshore IT outsourcing. The case study methodology was found suitable for achieving the study's main aim and objectives outlined in section 1.3. Qualitative research methods are employed to facilitate an in-depth understanding of the processes, organisational factors and effects of change related to offshore outsourcing within the real-life context of this phenomenon. The independent information systems departments at PharmaCom served as the units of analysis for this investigation. The study utilised a multiple-case design as well as multiple sources of evidence in order to strengthen the validity of findings. An analysis of similarities and differences of the offshore programme outcomes across the three cases provided the basis for drawing conclusions.

1.6. DELIMITATIONS OF THE STUDY

The delimitations of this study are as follows:

- Only those employees who participated in the offshore initiative were considered for inclusion in the study.
- Time factor limited the number of cases as well as the employees selected for interview and direct observation from those recommended by some study participants.
- Although an attempt was made to represent the various information systems departments of the company, no representativeness of the employee population is claimed in this study.
- The results are informed by responses from the employees at different managerial levels of the information systems departments at PharmaCom.

1.7. OUTLINE OF THE REPORT

This research begins with a critical view of offshore outsourcing and its relevance to the pharmaceutical industry (chapter two). Chapter three offers an evaluation of the organisational change literature in order to gain a better understanding of organisational change, including a look at prominent change theories and change management models. Chapter four outlines the methodology employed to achieve the objectives of this study. Chapter five provides within case analysis of the three information systems departments, utilising interview data, observation notes, and corporate documents. Chapter six discusses the results of a cross-case analysis of the three cases. The last chapter summarises the research effort and presents conclusions and recommendations for future research, as well as recommendations for improvements to existing change management practices.

2. CRITICAL VIEW OF OFFSHORE OUTSOURCING

2.1. INTRODUCTION

The term 'outsourcing' refers to the general business practice through which firms cut costs by transferring a portion or an entire organisational function to an external agency located either domestically or abroad rather than performing it internally. However, when this function is performed by the firm's own subsidiary abroad or is outsourced to an agency located in a foreign country through an arm's length agreement, the term 'offshore outsourcing' applies (Harrison and McMillan, 2006). The National Academy of Public Administration (2006) notes that, in spite of the differences between these terms, the definitions tend to focus on the movement of employment and production of goods or services to offshore locations and imply an increase in imports.

The competitive pressures to reduce costs and the rapid changes and innovations in information and communication technologies have together increased the potential of trade in services in recent years, and many service sector activities are becoming increasingly globalised, especially because these technologies allow the production of services to be location independent (Organisation for Economic Cooperation and Development, 2006). With services accounting for nearly two-thirds of output and foreign direct investment in most developed countries (Organisation for Economic Cooperation and Development, 2006), there is growing interest among firms to outsource service activities to offshore locations not only to achieve significant cost savings but also to improve quality of service, obtain expert skills, improve processes, and to allow them to focus on their core competencies. Current research indicates that many U.S. and European firms have achieved significant cost benefits from offshore outsourcing, in addition to mere wage arbitrage savings (The Boston Consulting Group and University of Pennsylvania, The Wharton School, 2007).

In 2003, an estimated 200 of the Fortune 500 companies were using some form of offshore services and the volume of offshored work is projected to increase substantially in the near future (PharmaCom, 2003b). Aron (2003) notes that these companies are going overseas to procure services ranging from customer contact at call centres to complex financial analyses.

2.2. OFFSHORE OUTSOURCING AS A BUSINESS STRATEGY

Firms choose to outsource for a variety of reasons and the decision to outsource can be a critical one. A firm that plans to outsource must first clarify its organisational goals and define what it wants to achieve through outsourcing. The goals of outsourcing may be tactical, such as to reduce or control costs or free up capital funds, or strategic, such as to gain access to a specific technology.

Outsourcing is an effective cost-saving strategy when applied properly. It is sometimes more economical to purchase goods or services from firms with comparative advantages than it is to produce these goods or services internally. In this case, a firm may decide to tactically outsource its bookkeeping function to an external accounting firm, as it may be more cost effective to do so than managing it internally with in-house accountants. General Electric, for example, has outsourced about 900 different business processes to India and as a result saves nearly $350 million annually (The Boston Consulting Group and University of Pennsylvania, The Wharton School, 2007). Thus, a firm's decision to outsource falls within the class of 'make' or 'buy' decisions (Walker and Weber, 1984).

Alternatively, firms may outsource activities that are not part of their strategic core competency (Prahalad and Hamel, 1990) and by divesting non-core functions, firms are able to focus their limited resources on activities that are critical to the business. Here, competencies refer to a set of skills that cut across traditional functions such as production, finance, sales, etc (Quinn and Hilmer, 1994). Dell is an example of a company that outsources for strategic reasons. The company regards marketing and sales as its core competencies, which focus on what matters to its customers, and outsources virtually all manufacturing. With a direct sales model, the company concentrates on speeding products through its highly efficient supply chain, thereby reducing inventory time.

Offshore outsourcing is currently being driven by the recognition of more companies of the benefits of outsourcing as a business strategy. With that recognition has come less emphasis on cost reduction and more emphasis on such benefits as flexibility and speed in delivering business solutions, access to new technologies and skills, ongoing productivity improvement, and enhanced training and development for employees. Moreover, Brainard and Litan (2004) state that offshore outsourcing can have an important effect on firms by helping them to accelerate the development of innovative products and services

at far lower cost, an effect that has thus far been unmeasured. Not surprisingly, companies today are engaged in transformational outsourcing, which facilitates rapid organisational change, helps to launch new strategies, and reshapes company boundaries, by partnering with other firms in order to achieve rapid, substantial and sustainable improvement in enterprise-level performance (Linder, 2004).

2.3. TYPES OF OFFSHORE OUTSOURCING

With the growth in the outsourcing of business functions and services to offshore locations, the terms 'business process outsourcing' and 'offshore outsourcing' have entered the business discourse and they are often used interchangeably despite important differences. At this point, it is important to first clarify these terms.

2.3.1. Business Process Outsourcing

Business Process Outsourcing (BPO) occurs when a firm completely hands over the execution and management of a particular business process, such as back office processing and call-centre support, to an external supplier that specialises in that process. The underlying theory is that the external supplier can execute the process more efficiently, thereby generating significant cost savings for the outsourcing company. In the last several years, BPO contracts have increasingly been awarded to offshore suppliers in developing countries.

2.3.2. Offshore Outsourcing

Offshore outsourcing refers specifically to the practice of outsourcing to suppliers in foreign countries, mainly to take advantage of wage arbitrage. In this practice, companies typically engage foreign suppliers to perform some or all business functions in a country other than the one where the product or service will be sold or consumed. Offshore outsourcing occurs commonly in the manufacturing and service sectors. China has emerged as a preferred destination for manufacturing offshoring since its induction into the World Trade Organisation (WTO) in 2001. Similarly, India has become a major destination for technology-enabled offshoring of services, although there are other countries that are now emerging as alternate destinations. In these countries, educated workers typically work for a much lower wage than their counterparts in developed

countries. For offshore outsourcing to be economically viable, however, savings from the lower wage rate must exceed the additional costs of management and risk associated with offshore outsourcing.

The outsourcing of IT functions and services continues to be the dominant offshore activity, but firms are steadily expanding the functions and processes they are relocating to offshore destinations (Lowes, Celner and Gentle, 2004). The scope of these IT services includes: hardware maintenance and support, software maintenance and support, consulting, software development and integration, training and education, IT management, and business process and transaction management (Gartner, 2002). As with the outsourcing of any business function or service, IT outsourcing involves the sharing or transferring of decision making powers and management control to the external supplier, which necessitates two-way information exchange, coordination, and trust between both parties. Although the decisions to outsource have been traditionally driven by cost savings and are based on the assumption that the advantages of outsourcing outweigh its disadvantages, there are some significant risks that require careful consideration. One of the major consequences of outsourcing IT functions and services is that the outsourcing organisation becomes increasingly dependent on the external service provider to perform certain essential functions (e.g. service support to customers), which can subsequently result in the loss of control over these functions or activities. Other consequences include threats to intellectual property, customer dissatisfaction arising from poor quality of service, underestimating cost savings because of hidden costs, and so forth. For example, a survey of 431 U.S. and Canadian chief information officers conducted by the consulting firm Deloitte & Touche highlights that these companies were consistently disappointed with the IT service providers (Scheier, 1997). Another long-term study of 90 offshore initiatives found that over half of the offshore outsourcing initiatives failed to meet cost savings and contract performance targets (Foote, 2004).

Notwithstanding these risks, IT outsourcing provides firms with new options for the provision and governance of information technology resources (Kambil and Turner, 1994). More specifically, effective IT outsourcing can not only result in increased non-financial benefits such as a focus on core competencies, quality improvement, acquisition of external competencies, and control over internal departments, but also provide other benefits like reducing technological risks, improving productivity, gaining access to leading-edge technologies, easing the management tasks, and implementing changes

more rapidly (Koong, Liu and Wang, 2007). Thus, all U.S. enterprises must now consider offshore outsourcing of IT services as one of their top strategic sourcing options, according to Gartner (2003), a leading provider of research and analysis on the IT industry.

2.3.3. Models of Offshore Outsourcing

Selecting an appropriate model for outsourcing to offshore service providers is an important aspect of a firm's outsourcing strategy. Depending on the level of flexibility and control needed by the firm, a number of potential contractual relationships are possible with the service providers. They range from full ownership, which offers high control and low flexibility, to short-term contracts, which bring high flexibility and low control (Quinn and Hilmer, 1994). The most popular models currently in use are joint ventures, captive centres, and outsourcing to offshore service providers. Each of these models is distinct in that they require different types of investments and carry different risks.

In the case of a joint venture, the client company partners with a local firm either by assuming an equity stake or forming an independent company to which both parties contribute resources, and share in the revenues, expenses and management control. The idea is that both organisations would benefit by complementing each other's strengths.

In the captive centre approach, the client company sets up its own development centre in an offshore location to access critical skills and take advantage of low labour costs. The client company, by leveraging its expatriate staff, sets up its own operations through hiring of local staff. Such a model enables the client company to have full operational control, while at the same time reducing risks related to security, intellectual property, etc.

With outsourcing to offshore service providers, Gartner (2005) has proposed a four-tiered Global Delivery Model (GDM) which provides benefits and challenges in terms of proximity to the service recipient, degree of client interface, and potential for cost savings due to labour arbitrage. According to Gartner, the key assumption in this model is that there is a risk-adjusted cost benefit as the delivery location of services moves further from the service receiver to take advantage of labour arbitrage in countries where labour costs are less. At the same time, Tafti (2005) cautions that without the careful consideration of

risks such as financial, legal and managerial control at the outset of an IT outsourcing venture, the benefits can be offset not only by financial losses, but also through the loss of individual privacy, data security and IT expertise.

There are three primary modes through which services can be leveraged in the GDM model: i) staff augmentation; ii) project-based consulting and system integration; and iii) service outsourcing. In the staff augmentation mode, the service provider simply provides resources but assumes no risk or responsibility for projects. In the project-based mode, project risk and responsibility are shared between the service provider and client. With service outsourcing mode, the service provider assumes all the risk and responsibility.

Finally, under the GDM model, service providers can render services using either one or a combination of the following delivery options:

1) Onsite: services are provided at the client's location;
2) Onshore: services provided from the provider's location in the client's country;
3) Nearshore: services provided from a different country (e.g. Canada, Mexico) but in the same time zone as the client's country (e.g. United States); and
4) Offshore: services provided from a country several time zones away from the client's location (e.g. India, Philippines).

2.4. ECONOMICS OF OFFSHORE OUTSOURCING

According to U.S. government data, the offshore outsourcing of business, professional and technical services by private sector firms in the U.S. grew by 76 percent from $21.2 billion in 1997 to $37.5 billion in 2002 (United States Government Accountability Office, 2004). On the other hand, private research by the management consulting firm McKinsey & Company estimates that offshore outsourcing will continue to grow at a rate of 65 percent per annum during the short term and will reach $147 billion by 2008 (Tafti, 2005). The U.S. government data also indicates that in occupations and industries commonly associated with offshoring, greater than average job declines have been observed since 2001 (United States Government Accountability Office, 2004). A recent study on the impact of offshoring on employment and wages points out that roughly 565,000 service jobs in eight sectors have been offshored to low-wage economies (Farrell, Laboissiere and Rosenfeld, 2006). Another study by Forrester Research predicts

that 3.4 million U.S. service jobs would move offshore by 2015, and that the use of offshore resources in the near term would grow 40 percent faster than originally expected (Mears, 2004). Some observers even claim that nearly all service jobs from developed nations will eventually move to low-wage countries (Kinetz, 2003).

While it appears that this offshoring trend will likely exert downward pressure on wages in developed countries by opening up additional sources of labour, economists claim that the productivity gains resulting from offshoring could offset these effects (Harrison and McMillan, 2006). Furthermore, Farrell, Laboissiere and Rosenfeld (2006) explain that offshoring will only have a negligible impact on overall employment in the United States during next five years because it is estimated that only 11 percent of all service jobs could be performed remotely. At the same time, these authors also point out that growth rates for wages and the number of jobs in the IT sector, where offshoring is common practice, tend to be higher when compared to those in the U.S. economy as a whole. Dossani and Kenney (2006) predict that employment in the IT sector will experience significant pressure from offshoring by way of available jobs, job tenure and wages during the next decade, and that a large percentage of these IT jobs are under the threat of moving offshore.

2.5. POLITICS OF OFFSHORE OUTSOURCING

Offshore outsourcing has been a hotly debated issue in the media in recent years. To illustrate, in 2003, when the U.S. economy began to recover after the 2001 recession, unemployment did not decrease as expected and many came to view offshore outsourcing as the major contributor to the reduction in U.S. output and the corresponding loss of jobs (Schultze, 2004; United States Government Accountability Office, 2004). For example, in the IT sector, many programmers lost their jobs to lower-paid foreign counterparts in India and elsewhere. The offshore outsourcing phenomenon raised fears that the U.S. economy may be permanently losing certain jobs and job categories, which could result in a downward pressure on wages. Many economists, however, have recently concluded that the higher-than-expected unemployment numbers were not the result of offshore outsourcing, and that the effect of offshore outsourcing on the jobless economic recovery has been insignificant (Bosworth, 2005; United States Government Accountability Office, 2004).

The labour unions have been alarmed at the recent trend of offshore outsourcing white-collar jobs (Schramm, 2004). They see the immediate effect of an increase in offshore outsourcing is a reduction in U.S. employment, either through a rise in worker layoffs or a slowdown in new job creation (National Writers Union, 2005). The unions contend that companies lay off white-collar workers from high-paying jobs while adding thousands of jobs overseas. In an attempt to curb offshore outsourcing, legislators at the state and national levels have urged proposals so as to restrict certain aspects of offshore outsourcing (Geary, 2004). For example, the Omnibus Appropriations Bill passed into law in 2004, forbids certain segments of the U.S. government from offshore outsourcing government work to foreign companies. As offshore outsourcing increasingly becomes a mainstream practice, more legislation is slated for introduction under the pretext of protecting American and European white-collar jobs. Even though the various legislative proposals directed at private entities would not completely ban them from offshore outsourcing, these proposals have the potential to impose significant burdens.

2.6. OFFSHORE OUTSOURCING IN THE PHARMACEUTICAL INDUSTRY

Unlike other industries such as banking, insurance and financial services, the pharmaceutical industry has been slow to embark on this shift towards offshore outsourcing. To illustrate, a survey of 1,346 North American and European decision makers by Forrester Research points out that only 19 percent of the industry was actively using offshore IT services as of June 2004 (McCarthy, 2004). The industry's interest in embracing offshore outsourcing stems from increasing pressures to shorten product lifecycles and drive costs down. These pressures have led a number of companies in the industry to adopt sourcing strategies that not only control costs, but also improve organisational performance. For example, GlaxoSmithKline, which has an extremely large procurement organisation with an annual outlay of $12 billion, has set a goal of developing what it calls 'best value purchasing' strategies (Hannon, 2004). The purpose of these strategies is to ensure that the company gets the best possible purchase price and cost for everything it buys. According to McNamara, Anderson and Kapur (2001, p.1), strategic sourcing decisions are not only more important and urgent than ever for the

pharmaceutical industry, but they offer the opportunity to 'extract cash from the value chain and set the stage for continued product and service innovation and growth'.

The pharmaceutical industry's intention to expand offshore outsourcing investments in IT presents new opportunities in two areas. First, offshore outsourcing of IT services such as software development, software maintenance and service support can help realise operational cost savings fairly rapidly, improving cost margins. Second, by offshore outsourcing these services, pharmaceutical companies are able to achieve business efficiencies (through a combination of improved customer services, reduced costs, better scalability, and workforce flexibility), which can lead to a greater return on existing and new IT investments. Furthermore, with pharmaceutical companies wishing to capitalise on recent advances in genomics and high-throughput screening technologies, which generate large volumes of complex highly-complex data (in terabytes), IT and informatics have taken on a stronger role in drug discovery and are experiencing relative growth within the enterprises.

2.7. SUMMARY

With major advances in communication and information technologies in recent decades, many service sector activities, especially IT-enabled services, have become increasingly tradable and globalised. The globalisation of services brings both advantages and disadvantages. Offshoring of services enables firms to achieve lower costs, higher productivity, and increased efficiency in production of services; however, it displaces existing jobs and tends to put downward pressure on wages. Despite concerns, many argue that offshoring of services offers many benefits for the consumers, including lower prices, and that the increased economic activity creates new job opportunities by way of increased demand for services. Although the pace of offshoring varies considerably from one industry to another, experts predict greater levels of offshoring will occur as firms learn to re-engineer their business processes.

3. LITERATURE REVIEW

3.1. INTRODUCTION

In today's complex and competitive global business environment, organisations must adapt to changing environmental conditions by continuously initiating changes in order to remain competitive and profitable. Significant change occurs when organisations undertake changes such as implementing new technologies, mergers or acquisitions, downsizing, restructuring operations, outsourcing, and when introducing new programmes like Six Sigma or Business Process Management. Hayes (2002) notes that these changes are usually prompted by a need to maintain or improve an organisation's effectiveness, where effectiveness relates to the organisation's ability to use resources efficiently to achieve immediate goals as well as embracing the need to changing conditions to be able to remain efficient over the longer term (Carnall, 1999). According to France, Harrington and Maguire (1987), improving an organisation's effectiveness has important consequences for its overall corporate performance. Despite the availability of a number of models to aid the successful diagnosis and implementation of change efforts, Beer and Nohria (2000, p.88) claim that 70 percent of all change initiatives fail because managers immerse themselves in an 'alphabet soup of initiatives' without fully understanding the nature and process of corporate change. Thus, there is a growing need for organisations to understand how change occurs so that they can better manage the change process to improve their organisational effectiveness.

Against this background, this chapter aims to organise and review the relevant literature on organisational change. The first section of this chapter provides a brief review of major theoretical perspectives to understand organisational change. In the second section, the key approaches involved in the management of change in organisations are reviewed. The last section reviews the current literature on organisational change in outsourcing and highlights the key phases and issues involved in the change process.

3.2. NATURE AND DIMENSIONS OF CHANGE

3.2.1. Definition of Change

Over the last four decades, organisational change has been studied a great deal in various disciplines such as psychology, sociology, management and organisational studies, and as a consequence, the literature is filled with definitions of change. According to one definition, organisational change involves 'moving from the known to the unknown, from relative certainty to relative uncertainty, from the familiar to the unfamiliar' (Cohen, Fink, Gadon and Willits, 1995, p.396). Van de Ven and Poole (1995, p.512), on the other hand, define 'change, one type of event, is an empirical observation of difference in form, quality, or state over time in an organisational entity'. A third definition comes from complexity theorists, who state that organisational change is 'characterised as a process that unfolds over time, revealing periods of greater and lesser instability, in which the restlessness of a system is an instinctive response toward survival in a continually changing environment' (Ferdig and Ludema, 2003, p.8). A common theme found in these definitions is that change represents a movement from the present state of the organisation to a desired future state.

Nadler and Tushman (1989) adopt a broader definition of change in which change can involve one or several components of an organisational system, or a realignment of the entire system, affecting all key sub-systems such as strategy, work, people, and formal and informal processes and structures. When the change impacts a large part of the organisation, the change is considered to be strategic in nature, but when the change is limited to specific organisational components, with the aim of maintaining or regaining congruence, it is treated as incremental. According to these authors, the main problem of change deals with how to maintain congruence of the organisational components in the system during change implementation.

In addition, Mezias and Glynn (1993, p.78) consider innovation as organisational change, with innovation defined as 'non-routine, significant, and discontinuous organisational change that embodies a new idea that is not consistent with the current concept of the organisation's business'. Based on this definition, an innovative organisation is one that is characterised by the following features: that is intelligent and creative, that is capable of

learning effectively, and that is capable of creating new knowledge (Lam, 2004). For Hage (1999), the subject of organisational innovation is relevant for studying the most basic problems of society.

3.2.2. Organisational Change Types

Ackerman (1997) distinguishes between three types of organisational change: i) developmental, ii) transitional; and iii) transformational. Developmental change deals with enhancing or improving an existing situation in an organisation, often focusing on improving skills or processes. Transitional change is about moving from the current state to a desired state in which management of the interim transition state occurs over a controlled period of time. Transformational change, which is radical in nature, requires a shift in assumptions on the part of the organisation and its members. In this type of change, a new state develops, which is unknown until it emerges, from the chaotic death of the old state, and the time period of transition from the old state to the new state cannot be easily controlled.

Another distinction between two forms of change is offered by Smith and Tranfield (1991): i) morphostatic; and ii) morphogenic. While morphostatic change is concerned with adapting to a status quo position and where the issue is about deciding which parameters need adjustment to bring things back to a steady state, morphogenic change is concerned with finding new and more appropriate organisational forms.

Similarly, DeWit and Meyer (1998) differentiate between operational change and strategic change. Operational change, which is the most common type of change found in organisations, focuses on enhancing the organisation's performance within the limits of the current system in order to align it with the environment. Strategic change, by contrast, aims to alter the organisation's alignment with its environment (Rajagopalan and Spreitzer, 1996). It is increasingly viewed as a shift in structures and processes as well as a reorientation of an organisation's mission and purpose (Fiss and Zajac, 2006). In sum, 'while operational changes are necessary to maintain the business and organisational systems, strategic changes are directed at renewing them' (DeWit and Meyer, 1998, p.163).

Finally, Nadler and Tushman (1995) propose the following typology to understand change: i) incremental; and ii) discontinuous. Incremental change, or first-order change, is

defined as a series of initiatives, each of which 'attempts to build on the work that has already been accomplished and improves the functioning of the enterprise in relatively small increments' (Nadler and Tushman, 1995, p.22). Discontinuous or revolutionary change, which is second-order change, on the other hand, involves fundamental transformation of the system. 'It is change that is major in scope, discontinuous with the past and generally irreversible. The [revolutionary] change effort distorts existing patterns of action and involves taking risks' (Quinn, 1996, p.3). Incremental change in firms is concerned 'with those periods when the industry is in equilibrium and the focus for change is "doing things better" through a process of continuous tinkering, adaptation and modification' (Hayes, 2002, p.6). Firms that tend to follow discontinuous change aim at realigning the organisation with the environment and the change occurs during periods of disequilibrium.

3.2.3. Change Dimensions

It is essential to first understand the magnitude and pace of change in order to properly differentiate and explain change theories. DeWit and Meyer (1998) describe the magnitude of change as consisting of two dimensions, scope of change and amplitude of change, and the pace of change as having two components, timing of change and speed of change. The scope of change may be comprehensive or narrowly focused, with comprehensive changes affecting the organisation at large and different organisational functions, while narrowly focused changes are limited to specific parts of an organisation or organisational functions. The amplitude of change varies from high to low, with low amplitude denoting incremental changes to the current state of the organisation, and high amplitude signifying radical changes to organisational structure, culture, processes or people.

The pace of change depends on the point in time during which changes are introduced and the time span over which changes occur. The timing of change ranges from intermittent to constant. In intermittent changes, the organisation selects the appropriate time to introduce changes and thus distributes change activities over time, while in constant changes, the timing for introducing changes is unimportant so long as there is no peak at any given point in time. The speed of change differs between high and low. The

change speed is high when a significant change is implemented within a short duration, and the change speed is low when a minor change is implemented gradually over a longer duration (DeWit and Meyer, 1998).

Dawson (2003a) takes a slightly different view on change dimensions and states that the change process consists of four dimensions: i) movement over time from a present state to a future state of the organisation; ii) the scale or scope of change focusing on permanent, influential, large-scale operational and strategic changes; iii) the political dimension indicating the varying degrees of political intensity depending on the settings and types of change initiatives; and iv) the substantive element of change, which refers to the essential nature and content of the change in question. Dawson adds that researchers often employ some combination of these four dimensions to define and classify organisational change.

3.3. THEORETICAL PERSPECTIVES ON CHANGE

To understand and explain the process of how and why organisations change, change researchers have utilised concepts, metaphors and theories from various disciplines, thus creating a diversity of theories and concepts as well as the compartmentalisation of perspectives (Van de Ven and Poole, 1995). A good majority of these theoretical perspectives on change focus on the relationship between the organisation and its environment, with roots in organisational theory. In order to understand organisational change related to offshore outsourcing and to place this study within a theoretical framework, it is necessary to first provide a brief review of these theoretical perspectives. In this theoretical review, consideration will be given to systems theory, particularly the open systems view, since it forms the basis for this research. Systems theory considers the individual, group, organisation, as well as the organisation's larger set of interdependent organisations as a dynamic, interrelated whole (McCann, 2004). It recognises that change in one part of a system can trigger changes in other parts of the system. In taking such a view on change, systems theory is able to facilitate a holistic understanding of change processes in organisations. Furthermore, while classical and neoclassical organisational theories provide a narrow view of change by treating the organisation as a fragmented and closed system that operates independently of external forces, the open systems approach adopts a broader perspective on change by considering the organisation as a living system that changes in the process of interacting with and adjusting to the environment and often attempts to influence that environment (Malhotra, 1993). In essence, the open systems

perspective emphasises the consideration of the relationship between the organisation and its external environment as well as what goes on within the organisation (Malhotra, 1993), and in so doing, it offers a more adequate theoretical framework for analysing change in complex organisations.

3.3.1. Population Ecology

The population ecology perspective holds that, 'to survive, organisations must be compatible with their environments, which include all the external social, economic, and political conditions that influence their actions' (Druckman, Singer and Van Cott, 1997, p.2). The theory explains organisational change as a function of environmental forces on populations of organisations, focusing on the demographic processes of selective replacement, i.e. organisational founding, growth, and mortality. Population ecology holds that the rates of founding and the rates of mortality are dependent on the number of organisations in an industry environment. It emphasises the concepts of legitimation and competition. As the population density increases, legitimation tends to increase the founding rates and to reduce the mortality rates for organisations, while competition attempts to reduce the founding rates and increase the mortality rates. These opposing forces cause competition to prevail at high density and legitimation at low density.

From this macro-level view, the organisation's ability to survive depends on having a structure that allows it to respond appropriately to the environment in which the organisation operates (Gharavi and Sor, 2006). Hannan and Freeman (1989) explain that structures of organisations have high inertia which hinders their adaptation when the environment changes. Those organisations that are incompatible with the environment are eventually replaced through competition with new organisations that are better suited to external demands (Hannan and Freeman, 1989). Thus, organisations can increase the chances of survival only if they are able to respond to the changes at the same rate as the changes in the environment.

Population ecologists subscribe to an evolutionary view of organisational change in which organisations descend from former or existing organisations and population-level change in organisational forms tends to be slow and continuous. Sammut-Bonnici and Wensley (2002) provide a detailed treatment of evolutionary theories in relation to organisational change. While some researchers have used population dynamics to

describe the development of organisational strategies, others have applied ecological models to organisations with an objective to understand questions concerning their differentiation, their strategies for adapting to environmental change, and their evolutionary characteristics (Javalgi, Todd and Scherer, 2005). For example, Gharavi and Sor (2006) employed the population ecology perspective to study evolutionary change caused by the major perturbation of the internet in the Australian travel industry. Similarly, Javalgi and colleagues have applied population ecology to evaluate the international growth dynamics of the internet in order to describe the long-term survival and differentiation strategies that impact success. Despite its influence in many management circles, the population ecology perspective has been criticised for taking 'an inverted image of managerial omnipotence—a theoretical framework in which individual and corporate actors are incapable of significantly modifying themselves or their environments' (McLaughlin, 2001, p.12).

Management researchers' attempts to strengthen this theoretical perspective have resulted in extensions to population ecology, with punctuated equilibrium theory being the most prominent. The punctuated equilibrium theory suggests that 'radical and discontinuous change of all or most organisational activities is necessary to break the grip of strong inertia' (Romanelli and Tushman, 1994, p.1143). In this model, 'firms go through periods of convergence and reorientation. The periods of convergence include incremental change which moves the firm towards greater internal consistency. The periods of reorientation include simultaneous discontinuous shifts in strategy, the distribution of power, structures, and control systems' (Taylor, 1999, p.524). Further, change is theorised to occur in five organisational activity domains, viz. organisational culture, strategy, structure, power distributions, and control systems (Romanelli and Tushman, 1994). These activity domains individually and as they interrelate with each other yield various levels of performance and inertia which are, in turn, basic factors affecting organisational change (Beugelsdijk, Slangen and van Herpen, 2002).

According to Romanelli and Tushman (1994), the punctuated equilibrium model has emerged as a prominent theoretical framework for explaining fundamental changes in patterns of organisational study. Gersick (1991), in applying the punctuated equilibrium model, discovered the following limitations. First, avoid the assumption that this is the only way that systems change. Second, avoid transporting models from one domain to another without first questioning how it might apply in other settings. These limitations

paved the way for new research on pace and sequencing of action in change processes (Gersick, 1994; Weick and Quinn, 1999). For example, Gersick's (1994) research distinguishes between temporal and event pacing, the two mechanisms that are used to modulate the speed and course of change. While temporal pacing enables punctuated change at milestone transition points and is suitable for non-routine situations, event pacing is appropriate for fostering incremental change because it focuses on specific events that indicate when actions are to be initiated. Weick (1999), on the other hand, emphasises the need to move beyond action sequencing and focus on developing process theory using stories that provide meaning to process. To Weick (1995), change is an occasion for sense making in organisations. Taylor (1999, p.525), in an attempt to further the sense-making concept, calls for moving past 'the insight that organisational members tend to make sense of organisational change in different ways to understanding how they will make sense of change differently'.

3.3.2. Institutional Theory

Institutional theory maintains that institutional environments are 'characterised by the elaboration of rules and requirements to which individual organisations must conform if they are to receive support and legitimacy' (Scott and Meyer, 1983, p.149). Scott (2001) defines institutions as social structures that have achieved a high degree of resilience, transmitted by different carriers such as symbolic systems, relational systems, routines, and artefacts. In contrast to population ecology, which focuses on the demographic processes of organisations, institutional theory is concerned with the processes through which structures, encompassing schemas, rules, norms, and routines become established guidelines for social behaviour (Scott, 2005). Conforming to these rules and requirements leads organisations to change so that they can increase their legitimacy, resources and survival capabilities (Hinings and Kondra, 1998), while at the same time reducing the risk of organisational mortality (Baum and Oliver, 1991). To the institutional theorists, change is 'external in origin, generated as organisations are forced to respond to, adapt to, or imitate the ebb and flow of normative and regulatory currents in their environments' (Aldrich, 1999, p.49). The pressures to conform to institutional norms can be a 'powerful force' against transformational (or radical) change, according to Buchko (1994). Greenwood and Hinings (1996, p.1023), on the other hand, take the view that 'a major

source of organisational resistance to change derives from the normative embeddedness of an organisation within its institutional context'.

From this theoretical perspective, conformity to institutional norms is facilitated by normative, coercive and mimetic pressures, and organisations that conform to the norms become optimal, if not efficient, thus increasing their survival capabilities (Hinings and Kondra, 1998). This implies the influence of contextual values, ceremonies and symbols on the structures, strategies and practices of organisations, thereby producing isomorphism (Fernandez-Alles and Valle-Cabrera, 2006). Organisations within a field tend to move toward isomorphic institutional environments in an effort to enhance their legitimacy, regardless of the immediate efficacy of these acquired practices and procedures. DiMaggio and Powell (1983, 1991) distinguish between competitive isomorphism which arises from market forces and institutional isomorphism arising from competition for political and organisational legitimacy. They identify three mechanisms for institutional isomorphic change: coercive, mimetic, and normative. While coercive isomorphism deals with formal and informal pressures exerted on organisations by other organisations that they are dependent on, mimetic processes involve imitating successful organisations in order to reduce uncertainty. Normative pressures arise from professionalisation, which socialises people within the organisation to view certain types of structures or procedures as legitimate. An interesting example of the implications of the different types of institutional isomorphism on the adoption of information technology is found in the work of Lai, Wong and Cheng (2006). Similarly, the research of Cannon and Woszczynski (2002) applied institutional theory to explain firms' responses to the Year 2000 problem in information technology and the pressures placed on firms by their constituents.

Conforming to the institutional environment has a constraining effect on the organisation's response to the environment (Hinings and Kondra, 1998), and there are differences in institutional environments, with some being more technical, focusing on exchanges, while others being more institutional and focus on rules. This distinction brings to fore the process of differentiation among institutions. Despite the pressures to conform to institutional norms, organisations can strategically choose to decouple when conditions are appropriate (Oliver, 1991). Decoupling, which is characterised as how organisations adopt distinct structures and/or practices for dealing with the potentially conflicting technical demands of the environment, not only serves to protect internal

routines from external uncertainties, but also helps to retain legitimacy from important external bodies at the same time (George, Chattopadhyay, Sitkin and Barden, 2006). However, once structures are established internally and are accepted by external stakeholders, they are often difficult to change.

Much of the research involving institutional theory has focused on explaining the adoption and persistence of practices, beliefs and structures which conform to normative expectations for legitimacy (George, *et al.*, 2006). Critics observe that institutional theory has little explanatory power when it comes to answering two fundamental questions: where does the impetus for change come from, and how might organisations respond to pressures for change (Hinings and Kondra, 1998).

3.3.3. Systems Theory

Since the 1950s, a number of social science disciplines have attempted to apply the concepts and principles of systems theory to organisational analysis. According to Banathy and Jenlink (2004), Von Bertalanffy first put forth the general theory of systems, which is a set of interrelated concepts and principles that apply to all systems. In developing systems theory, Von Bertalanffy distinguished between open and closed systems. While closed systems tend to be isolated from their environment, open systems actively transact with their environment to fulfil their needs, needs which are geared toward survival or achieving stability. An open system is fundamentally processual in nature and 'maintains itself through a process of exchange with its environment, during the course of which there is continuous building up and breaking down of component parts' and it 'may achieve a steady state, homeostasis, in which the system remains constant as a whole and in its phases, though there is a constant flow of the component materials' (Burrell and Morgan, 1979, p.59). Buckley (1967, p.50) posits that this feature of transacting with the environment of open systems 'is an essential factor underlying the system's viability, its reproductive ability or continuity, and its ability to change'.

The organisation, from an open systems view, is in constant interaction with the environment, processing inputs into outputs in order to create the conditions necessary for survival (Morgan, 1998). With the environment being a crucial element in the open system perspective, the uncertainty of the environment permeates the view of organisations as open systems. In this perspective, human agents are perceived as a

responder to the environment, either as a biological organism or as a machine. Organisational survival depends on being able to adapt to the environment and certain types of organisations are more capable of surviving in some environments than others (Morgan, 1980). Therefore, the organisation's primary task (Rice, 1963) is to survive by adapting itself to its environment. It follows from this premise that the primary task of the organisation's leadership is to manage 'the relations between an enterprise and its environment so as to permit optimal performance of the primary task of the enterprise' (Rice, 1963, p.13).

The systems approach to study the relationship between the organisation and its environment, and to the study of organisations as processes rather than structures, have been significantly influenced by the open systems concept (Burrell and Morgan, 1979). From the open systems perspective, organisational change is considered to be a rational formulation of long-term goals based on a strategic analysis of the environment in which the organisation functions. It is 'characterised as a process that unfolds over time, revealing periods of greater and lesser instability, in which the restlessness of a system is an instinctive response toward survival in a continually changing environment' (Ferdig and Ludema, 2003, p.8). Changes to the functions of organisations are used to propel growth and development, and changes that are required for organisational growth can often have a revolutionary effect (Izumi and Taylor, 1998). Change, in this context, is seen as something that the management is capable of bringing about in a systematic, predictable and controlled fashion. Moreover, the open systems position assumes managers as autonomous agents (i.e. individual actors are able to sense the organisation's environment and act upon it) and as the main instigators and controllers of the change process. The job of the managers, therefore, 'is to align, fit, or adapt organisations, through interventions, to an objective reality that exists "out there"', and success will depend on 'the ability to accurately mirror or represent reality and to choose and implement interventions appropriate to that reality' (Ford, 1999, p.480). Finally, the open systems perspective believes that the focus of change is neither on the individual nor on the group, but on the entire organisation (Burnes, 1996a).

Baines (1998, p.52) notes that 'open systems theory is a useful device with which to consider complex, commercial organisations'. For Baines, the open systems approach is also advantageous in organisational circumstances that involve complex, dynamic situations in a rapidly-changing environment. Similarly, Martins and Terblanche (2003)

state that the open system approach is one of the best approaches to describe organisational culture because it offers a holistic approach that allows the investigation of the interdependence, interaction and interrelationship of different sub-systems and elements of organisational culture in an organisation.

The open systems approach highlights the following points when applied to the management of organisational change in complex organisations. First, the system is composed of related and interdependent parts that integrate to form a whole. Second, the environment is perceived to be the ultimate source of materials, energy and information for the system, and therefore interaction with the environment is necessary for the system to function. Third, as the system becomes more complex, it is able to grow and change and becomes more open to the environment. Fourth, the system has elements that are weakly connected, indicating a looseness of connections among the parts. Finally, boundary between the system and the external environment may be fuzzy (Scott, 1998).

The considerable academic interest in open systems theory has given rise to a large literature base in management on the subject of organisational change. For example, the case study by Wennberg, Brandt and Revay (2006) adopts an open systems view to describe new and ongoing developments directed toward improving customer care, and to demonstrate the application of system theory to the resulting organisation and implementation in a Swedish retailer of pharmaceutical products. The research by Elloy and McCombs (1996) is another example of the application of the open systems concept to describe the design used in the implementation of self-managed work teams in a manufacturing plant.

The open systems view enables to 'study the pattern of relationships which characterise a system and its relationship to its environment in order to understand the way in which it operates' (Burrell and Morgan, 1979, p.59). The notion that there is no one best way to organise is central to the open systems approach. In taking this view to understand the process of organisational change, one is able to view the organisation and its components from both inside and outside perspectives. In addition, it is possible to examine relationships and patterns of interaction between sub-systems and their environments within the organisation as well as the relationships and reciprocal influences between the organisation and its external environment, outside of its formal boundary.

3.3.4. Contingency Theory

Contingency theory, which is based on the open systems approach that views the organisation as consisting of interrelated sub-systems, serves as a corrective to institutional theory (Corvig, 2005). It reasons that there is no one best way of organising and views any way of organising as not equally effective. Scott (1992, p.89) explains that 'the best way to organise depends on the nature of the environment to which the organisation relates'. Another important assumption of this theory is that organisations which have structures that more closely match the requirements of the context are likely to be more effective than those who do not (Pfeffer, 1997).

According to this theory, individual organisations have strategic choices in determining their structures, and successful organisations are able to adopt structures that address a number of contingencies. The theory posits that, based on the perceptions of the environment, an organisation selects contingency variables such as strategy, technology and size, and these variables determine the appropriate structure that would generate superior performance. A misfit between these variables and the structure results in poor performance. Further, when there is a change to any of the variables, the structure is considered to be out of fit and the organisation needs to undertake structural change to regain its fit. Therefore, it is the management's job to analyse the contingencies and design strategies in light of the organisation's strengths and weaknesses in order to develop strategic advantages (Pawlowsky, 2001). Mechanistic or bureaucratic structures, which emphasise centralisation, formalisation, standardisation and specialisation, are viewed as appropriate for achieving efficiency and consistency in stable environments. In this type of structure, certainty and predictability enable decision makers to rely on rules, policies and procedures to address routine tasks and problems. On the other hand, flexible and organic structures, emphasising decentralisation, are seen as suitable to achieve flexibility and adaptability in dynamic and uncertain environments. The uncertainty and unpredictability associated with this kind of structure require that decision makers utilise problem solving methods to address non-routine tasks and problems.

Contingency theory asserts that a good fit between the organisation and its environment is contingent upon a number of internal and external factors, including the size of the organisation, how it adapts to its environment, technologies used, managerial assumptions about employees, etc. In order to survive, organisations have to adapt to changes in the

environment and, during this adaptation process, environments influence how the organisation differentiates its internal structures and units (Corvig, 2005). From this adaptation standpoint, management of change requires the identification of environmental variables and the design of organisational architecture and procedures to match the changing external influences (Lawrence and Lorsch, 1967; Thompson, 1967).

There is ample support for contingency theory in organisational change research. For example, Stonebraker and Afifi (2004) found evidence for the notion that technology drives organisation structure changes. Similarly, Melan (1998) found the contingency approach to be appropriate to the development of total quality management implementation strategy. The problem with contingency theory, however, is that it is aprocessual and apolitical when it comes to treating change (Dawson, 2003a). Although the open systems approach is basically processual in nature, 'the contingency model often equates the organisation with structural characteristics, while ignoring the processual aspects' (Burrell and Morgan, 1979, p.180).

3.3.5. Complexity Theory

Over the past decade or so, a number of researchers have turned to complexity theory to understand organisational change (Houchin and MacLean, 2005). It seeks to explain how complex, organised systems emerge out of chaotic systems (Sammut-Bonnici and Wensley, 2002). The notion that complex systems are adaptive, whereas chaotic systems are not, is central to complexity theory. From this theoretical perspective, the complexity of all systems increases over time, leading to more change, and as the complexity increases, understanding the system becomes more difficult and adapting to the changing environment becomes more problematic (Mason, 2007).

When applied to the study of change in organisations, 'complexity theory sheds light on the processes of cooperation, adaptation and outcomes as factors that create change and transformation' (Sammut-Bonnici and Wensley, 2002, p.293). Proponents of this theory dismiss the notion that organisations move from one stable state (i.e. equilibrium) to another as a result of change (Stacey, 1996). In fact, they view change as the norm, not as the exception, and imply that instability is normal (Smith, 2004). To the complexity theorists, organisations are complex adaptive systems in which relationships between the

components are non-linear and contain positive and negative feedback loops, and the evolution of the system is very sensitive to initial conditions (Houchin and MacLean, 2005).

According to complexity theory, complex adaptive systems are characterised by four main elements. The first element is self-organisation. Self organisation is the process through which a pattern of order emerges from the multiple interactions of the many individual agents within a complex system. The continuous self-organisation facilitates innovative responses to emerge from changing environments (Mason, 2007). The second element, emergence, refers to properties of the whole that are not possessed by the individual agents. Emergence occurs as a result of the interactions of many different agents, and the outcome of any given change to the system cannot be predicted or controlled. Due to the unpredictable nature of the system, complex adaptive systems are unable to reach the state of equilibrium and operate between static and chaotic modes in a space known as 'edge of chaos'. The third element is feedback, which enables the system to adapt by making adjustments. While positive feedback, which is a reinforcement process, aims to intensify the change, negative feedback seeks to keep the system stable by limiting the change. The last element relates to sensitivity to initial conditions. The organisation's activities, events, routines, behaviours and human interactions that exist at a given point become the initial conditions for the emergence of future order, with some of these amplified through feedback and others dissipated through the system (Houchin and MacLean, 2005).

McElroy (2000) notes that understanding the influence of complexity theory on the performance of organisations could result in gains, especially in the field of business. In order to apply complexity theory effectively, however, organisational leaders need to treat the nature and hierarchy of organisation as emergent, shape and create contexts that promote self-organisation, and finally 'push systems into far-from-equilibrium states by generating instabilities and crises that will "flip" a system from one trajectory to another' to bring about organisational transformation (Morgan, 1998, p.232). This implies that those assuming a leadership role should promote an environment in which the different elements of the system are able to interact in order to create new forms of reality, guided by the overarching vision and rules (Keene, 2000).

There is a large amount of literature that focuses on the application of complexity theory to organisational change. For example, the study by Benbya and McKelvey (2006) has

applied complexity theory to show the sources of complexity related to information systems development, and to suggest the use of complexity theory as a frame of reference, analysing its implications on information system design and development to deal with the emergent nature of information systems. Although change researchers using complexity theory have been able to account for the structure, coherence and self-organising processes in organisational systems (Sammut-Bonnici and Wensley, 2002), critics contend that much of the complexity change literature focuses on resistance to change instead of focusing on the creation of new contexts (Morgan, 1998).

3.3.6. Information Technology/Information Systems Outsourcing Theories

The rapid growth in the number of public and private organisations outsourcing information technology/information systems activities and the need to improve outcomes from these outsourcing engagements have generated a significant amount of literature on the topic of IT outsourcing over the last decade or so. Willcocks, Lacity and Cullen (2006) state that the early literature (from 1991 to 1994) in this area focuses on the identification of characteristics of organisations that outsource. The literature since this period has been largely concerned with explaining outsourcing decisions using transaction cost economics.

When applied to the outsourcing of IT functions, the transaction cost theory emphasises the modelling and analysis of buyer-supplier relationships (Ngwenyama and Bryson, 1999). According to this theory, interfirm exchanges involve transaction costs necessitated by the need to put in place complex transaction governance structures for reducing the costs of bargaining over specialised resources, and the transaction costs here refer to the direct and indirect costs associated with negotiating, monitoring and enforcing explicit and implicit contracts between firms (Tiwana and Bush, 2007). A good number of studies that apply this theory have sought to examine either make or buy decisions or in-source (i.e. performing the services internally) versus outsource decisions. For example, early research efforts focused on both political and transaction cost factors motivating decisions to outsource, and identified the contract as the most important element in successful outsourcing relationships (Lacity and Hirschheim, 1993). Subsequent works involving transaction cost theory have highlighted that either total outsourcing or total in-sourcing of all IT functions is not as productive as an appropriate level of outsourcing (Chen and Perry, 2003; Lacity and Willcocks, 1998). The main issue

with the application of transaction cost approach to outsourcing is that it is able to provide only static comparative frameworks for studying alternate governance choices and fails to take into consideration other factors affecting outsourcing decisions (Kambil and Turner, 1994).

The resource-based view represents a competing theoretical approach for providing more comprehensive explanations of outsourcing decisions. It focuses on characteristics that enable organisations to gain a competitive advantage over their rivals in the industry. This view suggests that organisations are composed of bundles of resources such as input factors, assets and capabilities (Stewart, Straub and Weill, 2002), and that the organisation's unique resources and capabilities form the basis for its strategy. By possessing and effectively deploying these resources, which have characteristics such as value, barriers to duplication and appropriability, the organisation is able to achieve a competitive advantage (Fahy and Smithee, 1999). Doing so enables the organisation to earn economic rents or returns above the cost of capital.

The resource-based view of strategy 'emphasises strategic choice, charging the firm's management with the important tasks of identifying, developing and deploying key resources to maximise returns' (Fahy and Smithee, 1999, p.1). With IT playing a key role in the competitive strategies of organisations and with many organisations looking to external entities to meet their growing IT demands, it has become critical for managers to understand the consequences of their outsourcing decisions (Stewart, Straub and Weill, 2002). A significant part of the research involving the application of resource-based view to outsourcing has focused on the identification and definition of major IT resources and on their link to organisation performance (Wade and Hulland, 2004).

Evolving from the resource-based view, the core competence approach provides a powerful framework for explaining outsourcing decisions in organisations (Gilley and Rasheed, 2000). A focus on core competencies allows an organisation to become unique in its competitiveness, thus enabling it to compete with the best in the world (Stewart, Straub and Weill, 2002). From the core competency perspective, organisations reinforce their competitive advantage by retaining valuable, rare, non-imitable and non-sustainable strategic assets in-house, while outsourcing the rest (Willcocks, Lacity and Cullen, 2006). The outsourcing of non-core competencies allows the organisation to generate additional rents by having the non-core functions performed by specialist suppliers that have an advantage in those functions. Although IT resources are not considered to have a direct

influence over an organisation's competitive advantage, they constitute an integral part of a complex chain of assets and capabilities that can influence an organisation's performance through complementary relationships with other firm assets and capabilities (Wade and Hulland, 2004). With certain elements of IT systems and services viewed as strategic or core assets or capabilities, decisions to outsource these can have an adverse impact on the bottom line of an organisation (Straub, Weill and Stewart, 1998). Such decisions cannot be made based purely on cost factors, as wrong decisions can lead to the loss of core competencies and capabilities, and expose the organisation to unexpected risks (Ngwenyama and Bryson, 1999). Therefore, outsourcing decisions require organisations to develop risk analyses and identify strategies for managing risks (Beulen, Van Fenema and Currie, 2005).

In sum, the resource-based view stresses the need for organisations to capitalise on their unique assets as well as to develop management strategies to exploit the advantages from strategically positioned resources (Stewart, Straub and Weill, 2002). Critics of this view, however, contend that the uncertainty associated with a rapidly changing business environment makes it difficult for organisations to settle permanently on a strategic direction, thereby complicating the task of knowing which systems and services are strategic and which can be readily outsourced (Straub, Weill and Stewart, 1998).

Past studies of onshore and offshore IT outsourcing that employ transaction cost theory and resource-based view as well as their variants have generally contributed to a better understanding of outsourcing decisions made by organisations (Carmel and Nicholson, 2005; King and Torkzadeh, 2008). However, Khan, Currie, Weerakkody and Desai (2003) argue that prior research on offshore IT outsourcing has largely concentrated on demand-side issues, with analysis frequently centred on contracts between outsourcing firms and suppliers, and that little attention has been paid to examining the strategic and operational factors related to offshore outsourcing. Moreover, the aspect of managing organisational change during offshore IT outsourcing is virtually absent from this literature. For Seddon (2001), IT outsourcing is more about the management of human resources and cultural change and less about technology, implying that organisational change must be handled carefully if outsourcing efforts are to succeed. Given that the focus of the present study is on managing organisational change related offshore IT outsourcing rather than on the decision whether or not to use offshoring, neither of these two outsourcing theories discussed above provide an appropriate theoretical framework

for understanding organisational change. Furthermore, this study is more interested in the process of how IT organisations plan and implement change related to offshore outsourcing than in whether the particular offshore programme was a successful commercial or strategic venture from a business standpoint.

3.4. APPROACHES TO MANAGING CHANGE

Management of change involves the process of developing approaches to implementing changes in organisations. Approaches to managing change must address a number of organisational factors such as leadership, communication, employee motivation, training and development, etc. that are ongoing throughout the change process (Hayes, 2002) because a proper understanding of how employees are likely to respond to change is central to managing the process (Porter, 2004). Although there are a number of approaches to organisational change, researchers agree that the two dominant ones are planned and emergent approaches (Burnes, 2004). While the planned approach views change as an intentional and rational process, the emergent approach treats it as the outcome of a complex cultural and political process (Hayes, 2002). In spite of the differences between these two approaches, there is 'reasonable consensus in the literature regarding the critical ingredients needed to implement a successful change management programme' (Angehrn and Atherton, 1999, p.2).

3.4.1. Planned Approach

The vast majority of change efforts in organisations today follow the planned approach to change (Iles and Sutherland, 2001), including the one considered for this study. Under this approach, change is 'top-down' in nature and refers to the sequential process of systematically planning, organising, and implementing change so that an organisation can move from its current state to a desired future state (i.e. realising its vision) in a short period of time. Hayes (2002) observes that planned changes in organisations are usually triggered by the failure of people to create continuously adaptive organisations. Thus, planned changes are designed to change the behavioural elements of an organisation, such as people, processes and organisational culture, and ultimately lead to improved organisational outcomes (Porras and Silvers, 1991). In the planned approach, change is initiated internally within the organisation in response to environmental pressures and the

change usually affects many different parts of the organisation (Porras and Robertson, 1990). Further, the top management of the organisation is not only responsible for initiating the change, but also for its central planning and implementation (Burnes, 1996a). Burnes adds that implementation under the planned model of change relies on detailed plans and projections as well as the on the role of managers. Druhl, Langstaff, and Monson (2001) state that the planned approach to change can be summarised by the following characteristics: developing a vision; communicating the vision; top management determination; planning and programming; and adopting the best practice.

Planned change is synonymous with organisational development which has its origins in the work of Lewin (1951), who suggested that any effort to bring about planned change in organisations should treat the change as a multi-stage process. Lewin postulated that organisations exist in a state of 'quasi-stationary equilibrium', and as a result, tend to be stable and resist change. Therefore, for effective change to occur, the organisational forces that are driving the change must subdue the forces which are resisting the change (Friday and Friday, 2003). According to Lewin's theory, driving forces help to initiate and push the change in the desired direction, while restraining forces work to constrain or reduce the driving forces or direct them in the opposite direction. Change does not occur when these two forces are in equilibrium. In order to shift the equilibrium toward the direction of the planned change, the driving forces must either be increased or constraining forces removed. By diagnosing the change situation in terms of driving and restraining forces, a basis can be established for developing action plans to implement the desired change (Hayes, 2002).

3.4.1.1. Lewin's Three-Step Model

Lewin (1951) proposed a planned model of change consisting of three stages: i) unfreeze the organisation; ii) change it; and then iii) refreeze it in the new configuration. Schein (1987) explains this model as follows. The first stage focuses on changing the behaviour of people by unfreezing the existing situation or status quo. Unfreezing of the status quo, which is considered the equilibrium state, is necessary to generate awareness of the need for change and to motivate people in order to prepare them for the change. The objective here is to add new forces to direct behaviour away from the status quo and remove some of the restraining forces that perpetuate the current behaviour. The second stage involves changing what needs to be changed. A concise view of the new state is needed to achieve

this, thus clearly distinguishing the gap between the current state and the new state. The actions that can assist in making the change include identifying with a new role model or mentor, and scanning the environment for new relevant information. The last stage deals with sustaining the change after it has been implemented. For the new behaviours to become embedded in the organisation a new concept of self and identity has to be developed and new interpersonal relationships need to be established.

In essence, the planned change model focuses on improving 'the operation and effectiveness of the human side of the organisation through participative, group- and team-based programmes of change' (Burnes, 2004, p.888). Lewin (1958) notes that organisational change must be effected by targeting group behaviour rather than individual behaviour because people in organisations tend to work in groups. Therefore, individual behaviour should be viewed, modified or changed in order to align it with the current values, attitudes, and norms or culture of the group. Lewin adds that any improvement in group or individual performance resulting from the change is subject to reversal unless proper measures are taken to institutionalise the improved performance.

Over the last 50 years, this planned change model has generated important conceptual and face validity, with studies suggesting that many models of change processes articulated in a number of disciplines contain similar characteristics (Elrod and Tippett, 2002). As an example, Friday and Friday (2003) suggest that this model can be used as a theoretical framework for facilitating the management of diversity in organisations. Similarly, Scherpereel and Lefebvre (2006) find that the planned change model can be applied to expose the benefits of business simulations and the challenges posed by the internet to management development professionals. Not surprisingly, Lewin's highly influential model continues 'to be a generic recipe for organisational development' (Weick and Quinn, 1999, p.363), and it has been reformulated and recast in many forms (McWhinney, 1992). For example, the eight-phase model of Cummings and Huse (1989) and the four-phase model of Bullock and Batten (1985) are attempts to extend Lewin's model to enhance its practical application.

The planned change model has several limitations. An important limitation of this model is that it assumes that organisations operate under stable conditions (Burnes, 1996a), and it treats planned change from the perspective of top management and indicates that

change is linear (Moorhead and Griffin, 1998). In addition, Dawson (1994) contends that the notion of refreezing is not relevant to organisations operating in turbulent environments.

3.4.2. Emergent Approach

As an alternative to the planned approach, Tsoukas and Chia (2002) offer a process-centred approach to change in which organisational change is seen as continuous and evolving. In this emergent approach, the impetus for change comes from the organisation's need to constantly adapt to an unpredictable and rapidly changing environment. It views change as a process in which individual parts of the organisation deal incrementally and separately with one problem and one goal at a time (Burnes, 2005). Those taking the emergent view of change believe that 'the key decisions about matching the organisation's resources with opportunities, constraints and demands in the environment evolve over time and are the outcome of cultural and political processes in organisations' (Hayes, 2002, p.37).

Unlike in the planned approach, change in the emergent approach tends to be a bottom-up activity and is seen as an open-ended process (Burnes, 1996b). It recognises that a number of small adjustments, which are created simultaneously across units, can accumulate and produce significant change over a relatively long time period (Weick and Quinn, 1999). To these authors, the issues of continuity and scale are central to emergent change, with continuity associated with organisational culture, and the scale treating micro-level changes as the basis for transformational change and the means for institutionalising it. Further, interventions in emergent change are not concerned with creating the conditions for change, but with developing a collective vision that provides direction to already ongoing change activities (Burnes, 1996b). Finally, the role of managers in emergent change is one of understanding the dynamics of change and 'managing language, dialogue, and identity' (Weick and Quinn, 1999, p.381). To create a culture of continuous change, managers seek to foster an organisational structure and climate that promotes and sustains experimentation and risk-taking (Burnes, 1996b).

A distinctive feature of the emergent approach is that it views change as a learning process and not simply as a method of changing organisational structures and practices (Burnes, 1996b). Organisations adopting this approach need to have flexible structures

and processes in order to be able to respond to unexpected and unpredictable circumstances as they learn to deal with the emergent aspects of the change (Kenny, 2006). Creating learning organisations is therefore viewed as a means of coping with the increasingly turbulent environment (Beer and Eisenstat, 1996).

Compared to the planned view of change, the emergent view is backed by relatively limited research and the approach itself seems to be unorganised with a variety of different views found in the literature. In spite of this disparity in views, there is agreement among the proponents that emergent changes should be aligned with the organisation's internal and external demands, and that managers should continuously scan the environment in order to adapt and respond to changes if they want to improve organisational performance (Burnes, 1996b).

3.4.2.1. Learning Organisation

The topic of how organisations learn has been subject to considerable research in recent years. Bent and Paauwe and Williams (1999) group these theoretical contributions into two major areas. While one stream of research focuses on the importance of developing stimulating structures and cultures through which learning by individuals is fostered, the other stream is concerned with the importance of organisational memory and systems which act as knowledge repositories, without regard to the continued participation of individuals. An important outcome of the research on organisational learning has been the development of templates, or ideal forms, which organisations could attempt to emulate (Easterby-Smith, Burgoyne and Araujo, 1999). Sugarman (2001) argues that the ability to learn better and faster than the competitors is an important core competency for any organisation. To be successful at learning, an organisation must be good at two things: 'good at *creating new solutions* and good at *sharing knowledge* with other members who may need it' (Sugarman, 2001, p.62).

Senge (1990), for example, uses theoretical findings from organisational learning to provide specific recommendations for creating organisations that can continuously and effectively learn. In Senge's notion of 'learning organisation', the organisation's ability to gather, analyse, and use information is a necessary requirement to succeed in the information age. In order to do this, the organisation needs to be structured such that: i) people can continuously expand their capacity to learn and be productive; ii) new patterns

of thinking are nurtured; iii) collective aspirations are encouraged; and iv) people are encouraged to see the 'whole picture' together (Senge, 1990). By drawing from organisational learning as well as the related fields of knowledge management and intellectual capital, firms can improve competitive advantage and facilitate organisational learning (McElyea, 2002).

Appreciative inquiry is yet another approach to build learning organisations. It 'refers to both a search for knowledge and a theory of intentional collective action which are designed to help evolve the normative vision and will of a group, organisation, or society as a whole' (Cooperrider and Srivastva, 1987, p.159). Described by some as a positive revolution in change, it is a form of action research that is based on the premise that organisations change in the direction in which they inquire. In this approach, the entire organisation is first involved in an inquiry on what works, the data that is discovered from the inquiry is then analysed for common themes, and finally the organisation uses these discoveries to build a new future where the best becomes more common (Hammond, 1996). The appreciative inquiry approach to change is implemented by using the '4-D' model: discover, dream, design, and deliver.

3.4.2.2. Processual Model

Proponents of the emergent approach, especially those who adopt a processual view, maintain that the temporal and contextual factors influencing the change render the task of providing simple prescriptions for successfully managing change difficult (Burnes, 1996b). From their standpoint, change is a complex process that 'needs to be managed as an ongoing and dynamic process and not as a single reaction to adverse contingent circumstance' (Dawson, 1994, p.182). Therefore, the task of change managers is one of navigating through the complexity by examining the available options, collecting and monitoring information, and availing themselves of appropriate resources (Burnes, 1996a). 'Instead of directing and controlling change, their role becomes one of ensuring the organisation's members are receptive to, and have the necessary skills and motivation, to take charge of, the change process' (Burnes, 1996a, p.189). Collins (1998, p.70) adds that, in this approach, change managers are presumed to have 'some scope for choice and manoeuvre'.

Processualists argue that their approach is less prescriptive but more analytical in nature, and the goal of their approach is 'to understand and explain rather than to direct and influence processes towards some preferred end point' (Dawson, 2001, p.297). In assuming this view, the processual approach is not 'against the importance of planning for change, rather it is pointing out that change is unpredictable' (Dawson, 2003b, p.25). Thus, processual analysis need not assume that change is emergent, rather it can be engaged to understand change both as an emergent process as well as a top-down planned process (Bailey, Smith and Vickers, 2006).

The processual perspective is based on the premise that 'organisations undergoing change comprise a number of dynamic states which interlock and overlap, the processes associated with change should be analysed "as-they-happen" so that their emergent character can be understood within the context in which they take place' (Dawson, 2003a, p.41). Process refers to a series of individual and collective events, actions, and activities that unfold over a period of time within a context (Pettigrew, Woodman and Cameron, 2001). Context is concerned with the antecedent conditions of change, the internal structure, cultural, social, relational and political context within which leadership occurs, as well as features of the outer context of the organisation such as social, economic, political and competitive environment from which the legitimacy for change is derived (Pettigrew, 1985; 1987). In addition, context is linked to the temporal aspect of the history of change events as well as their unfolding over time. Thus, understanding change from this perspective not only 'involves the interrogation of phenomena over time using the language of what, who, where, why, when, and how', but also studying events and the construction of events by people to identify patterns in the process of changing (Pettigrew, *et al.*, 2001, p.700). In order to facilitate such an understanding of change processes, processualists gather longitudinal qualitative data (Dawson, 2003a; Ford and Greer, 2006).

Pettigrew (1992) argues that it is important to take a holistic view when analysing change as there are significant advantages in linking process to content and context through time. Pettigrew (1995) explains that any analysis of change processes should focus on: first, the importance of embeddedness and studying change in the context of interconnected levels of analysis; second, locating change in the past, present and future time; third, exploring the context of action, how context is a product of action and vice-versa; and finally, the recognition that the causation of change is neither linear nor singular.

In Dawson's (2003a) point of view, the analysis of change should focus on the following three determinants: i) substance of change; ii) politics of change; and iii) context of change. Substance involves the type and scale of change. Politics deals with political activities such as consultation, negotiation, conflict and resistance. Context refers to the past, present and future context in which the organisation operates as well as the external and internal operating environments of the organisation. These factors not only combine to shape the processes of change, but also provide a useful framework through which to examine change, keeping in focus the flow of events in a wider spatial, temporal and political context (Buchanan, Fitzgerald, Ketley, Gollop, Jones, Lamont, Neath and Whitby, 2005).

To Pettigrew (1990), content is a critical dimension of organisational change, and it constitutes four distinct elements: formal structures, systems of shared beliefs, work processes, and social relationships (Huy, 2001). Although the amount of literature dealing with content has increased during the last two decades, 'the field of organisational change is far from mature in understanding the dynamics and effects of time, process, discontinuity, and context' (Pettigrew, *et al.*, 2001, p.697). A number of researchers have specifically pointed out the absence of 'process aspects' in this literature (Pettigrew, 1987; Pettigrew, Ferlie and McKee, 1992). In response to these criticisms, a growing number of process-oriented studies, some reported as case study narratives, have been carried out by change researchers in recent years (Clark, 1995; Lau, 1999; Dawson, 2001; Ford and Greer, 2006). As a result, the 'change process school' has been differentiated from the 'change content school' (Rajagopalan and Spreitzer, 1996).

Buchanan and Boddy (1992) have criticised the processual approach for marginalising the role of the individual change driver. Buchanan (2003) argues that the processual approach provides a single-voiced and authoritative rendering of the change process and as a result provides only a partial understanding of organisational dynamics. Nevertheless, from the standpoint of some change researchers, the processual approach provides a distinct view on innovation (Van de Ven and Poole, 1990), strategic change (Van de Ven, 1992) and organisational behaviour in general (Mohr, 1982). For change practitioners adopting an emergent view of change, the processual approach affords an understanding and knowledge of the organisation's environment to enable rapid and proactive responses to the forces for change (McCalman and Paton, 1992). On the other hand, for those practitioners taking a planned view of change, understanding the processes and the

elements involved in successful implementation is an essential undertaking (Ford and Greer, 2006). As an example, Pettigrew's content-context-process framework can be used as a generic model for examining implementation of organisational strategy (Lau, 1999). Weick (1996) finds that implementing new strategies in an existing organisation can be difficult because it involves changing a work force with embedded work routines, attitudes, skills, relationships, and expectations. With strategy formulation and implementation increasingly seen as an ongoing, never-ending and integrated process that requires continuous reassessment and reformation (Markides, 1999), Pettigrew's model can provide important guidelines to top managers for improving the formulation and implementation of strategic decisions (Lau, 1999).

Similarly, Dawson (2003a) has proposed a process method by which complex change processes in organisations can be understood. This method breaks down the change process into three general timeframes: i) initial conception of the need to change; ii) process of change; and iii) operation of new work practices. More specifically, these timeframes provide a structure for constructing data categories from untidy change data, along the lines of themes or activities and tasks.

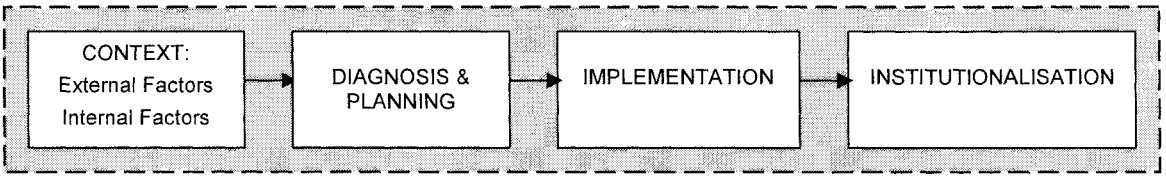
The implementation of offshore outsourcing initiatives in IT organisations is a complex process and it can only be studied within the context in which it occurs. The processual approach provides a useful method for understanding and interpreting this organisational phenomenon across a number of levels of analysis, linking actions with context, and developing holistic rather than linear explanations (Pettigrew, *et al.*, 2001). In so doing, the processual approach enables the researcher to highlight critical organisational and other factors involved in managing this change. Furthermore, the processual approach can satisfy the conflict between inductive organisational studies that tend to be 'data-rich, theory-poor' and deductive studies which are often 'data-poor, theory-rich', and it can help bridge the gap between qualitative and quantitative research by accommodating methods from both traditions without conflict (Jones, 2000).

3.5. MANAGING THE PROCESS OF CHANGE IN OUTSOURCING

Offshore outsourcing of IT-enabled services continues to be increasingly embraced by a large number of firms in the USA and Europe. At the same time, many offshore IT outsourcing initiatives are failing (NeoIT, 2006a) because offshoring causes changes throughout the organisation (Sourcing Interests Group, 2003; NeoIT, 2007), which are often poorly managed. In spite of the calls for change management with respect to offshore outsourcing initiatives (NeoIT, 2006a; Bendor-Samuel, 2004), there has been a lack of critical and systematic research on how organisational change is managed at different stages of the offshore outsourcing lifecycle and a dearth of studies that provide a holistic view of this change process. Much of the extant literature on change management deals with prescriptive models that present 'one best way' to manage planned change. Critics contend that these contingency models tend to be ahistorical, acontextual and apolitical in character (Pettigrew, 1985; Dawson, 2003a). Change research, on the other hand, has largely detracted from the complexity and analytical sophistication required to characterise change (Wilson, 1992), and ignores historical, economic, cultural, social and political factors that influence change. In order to address these issues, a growing number of researchers have suggested the use of processual research as an alternative framework to understand the complexities and dynamics of organisational change (Dawson, 2003a; Pettigrew, *et al.*, 2001; Poole, 2004). Since the interest and focus of this study are on contextual and organisational factors involved in managing change processes related offshore outsourcing, the processual approach serves as an appropriate method of investigation.

Based on the analysis provided in the previous section of the different approaches to managing change, a generic process model of change (see Figure 1) is proposed to understand the change process related to offshore outsourcing implementation. This model, which is based on the works of Lewin (1951), Burke (1982), Kotter (1996) and Dawson (2003a), focuses on the context and procedures involved in change and highlights the significance of the following four components in the change process: i) contextual conditions prompting the change (i.e. external and internal factors); ii) diagnosing the need for change and developing plans for implementation; iii) implementing the change; and iv) institutionalising the change.

Figure 1. Generic process model of change



Practical experience also suggests that offshore outsourcing implementation adheres to this general change process. It must be noted that the generic process model is used here only as a starting point for the inquiry and is by no means meant to preclude from the investigation other components or factors of interest that would emerge during data collection or analysis. Moreover, it is understood that this framework will likely undergo modification in order to accommodate the findings resulting from the data analysis of this study. Descriptions of each of these four change process components are provided below.

3.5.1. Context

According to Tushman and Anderson (1986, p.439), organisational outcomes are 'critically influenced by the context within which they occur'. Hackney and McBride (1995) consider three types of contextual factors that influence change in organisations. The first is the external context which involves legislative, commercial and social forces prompting the change in an organisation. The second is the organisation's internal context, which is characterised by the influence of an organisation's social and technical infrastructure, its management style, and the grouping of actors within interest groups. The last one, the individual context (also internal to the organisation), deals with organisational actors that have their own views of reality and their own agendas. The interactions between these actors are seen as having a significant effect on the direction of an organisation.

Similarly, Pettigrew and his colleagues (2001) distinguish between outer and inner contexts in organisations. While the outer context consists of the economic, social, political, and industry environment in which the organisation operates, the inner context refers to the organisation's internal structures and processes, including history, corporate strategy, culture, politics, etc. These authors state that a balanced treatment of both the outer and the inner contexts is necessary to develop a clear understanding of the contextual factors influencing change in organisations. Thus, 'theoretically sound and practically useful research on change should explore the contexts, content, and process of

a change together with their interconnections over time' (Pettigrew, *et al.*, 2001, p.698). An example of this type of research is the work of Orlikowski (1993) which found external factors such as customers, competitors and available technologies, as well as internal factors including corporate strategy, structure and culture, as relevant in influencing organisational change related to the implementation of computer-aided software engineering tools in two companies.

Although the boundary between external and internal contexts in organisations is sometimes blurred, there is often a synergistic relationship between these two, in that an external pressure can be transformed into an internal desire for change (Eckel, Green, Hill and Mallon, 1999). The pressures for change increasingly come from rapid developments in the external environment in which the organisation is located, but some come from within the organisation, as well. Tushman and Anderson (1986) note that the external environment, also referred to as the mega-environment, is characterised by the following elements: technological, economic, legal-political, social-cultural, and international. Although organisations have no direct control over the external context, they must understand and adapt to the environmental conditions so as to ensure their survival and growth. In an offshore outsourcing context, the external environment also involves understanding issues related to geographic distance, time separation, and organisational differences, all of which influence decision-making (Clott, 2007). This requires that the organisation's top leadership fully embrace and understand the mega-environment in order to respond to opportunities and threats presented by the environment. To do so, the leadership must engage in environmental scanning, a process of gathering and understanding information about events and trends in the organisation's environment. This knowledge of the external environment assists the leadership in their task of planning the organisation's future course of action (Correia and Wilson, 1997). Thus, by serving as the interpreters of the organisation's environment, the leadership mediates the influence of the organisation's environment (Huber and Glick, 1993).

With the organisation's external environment changing constantly, the organisation's internal context also needs to respond concurrently (Lau, 1999; Walker, Armenakis and Bernerth, 2007). Internally, the uncertainty resulting from the external environment is considered an important variable that influences the depth and scope of offshore outsourcing efforts (Koong, Liu and Wang, 2007). Further, research suggests that if the organisation's internal factors, such as technologies, processes and structures, are not well

suited to each other and to the environment, performance will suffer, and it may even threaten organisational survival (Huber and Glick, 1993). The extent to which managers have control over these internal factors will determine their level of commitment to organisational change (Appelbaum, St-Pierre and Glavas, 1998). Further, since organisational structure and culture are part of the organisation's internal context, they can influence patterns of behaviour and attitudes toward change, and these attitudes may be more or less receptive to the change (Buchanan, *et al.*, 2005). To be more specific, the shared assumptions, beliefs and values underlying the organisation's culture can be expected to guide and shape people's attitudes toward organisational change (Rashid, Sambasivan and Rahman, 2004). At the same time, sub-cultures and sub-culture-gaps in the organisation can lead to serious problems such as people leaving the change project, thus impeding implementation progress, points out a recent study of IT implementation within a UK city council (Finnegan and Willcocks, 2006).

3.5.2. Diagnosis and Planning

Diagnosing the need for change in organisations entails the process of collecting, analysing and interpreting data about individual, group and organisational functioning (Hayes, 2002). There are several benefits associated with conducting an organisational diagnosis before launching a change initiative. The diagnosis can inform the leadership of the attitudes and perceptions of employees concerning the change, assist the leadership in determining how change events can impact organisational outcomes, and serve as a guide to the leaders for planning corrective action that may be required to address any issues in the change implementation process (Schraeder, 2004).

With the lack of prescriptive and practical models to guide managers through the outsourcing decision process (Boer, Gaytan and Arroyo, 2006), organisations have to rely on organisational models to assess the current state of their organisational functioning and develop strategies for implementing offshore outsourcing. A common feature of many of these organisational models is their emphasis on a holistic perspective, which focuses on the overall organisational system, rather than on the parts of the system. Hayes (2002) discusses models ranging from diagnostic to process models that managers and consultants commonly use. For example, one set of diagnostic models, which include PEST (Political, Economic, Socio-cultural, and Technological factors) analysis and SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis, focus on the fit

between the organisation and its environment. Another set, encompassing Pascale and Athos' 7-S model and Weisbord's Six-Box model, deals with diagnosing the organisation's internal environment. The third set comprising of Kotter's integrative model and Nadler and Tushman's congruence model aim at alignment of both internal and external environments. Such an assortment of change models in use indicates the diversity of viewpoints of how change is achieved and the validity of a number of these viewpoints has been confirmed, not through formal testing, but through practical applications and comparison to observation (Ford and Evans, 2001).

Several authors have argued that the high rate of failure of change programmes in organisations is in part attributable to the inadequacy of well-planned diagnoses that are based on accurate data (Pofi, 2002; Harrison and Shirom, 1999). Diagnostic analysis not only involves data collection prior to change implementation, but also the identification of complexities, i.e. barriers and facilitators, within the organisation which can constrain or facilitate the undertaking of change (Hamilton, McLaren and Mulhall, 2007). Although diagnostic models are helpful in planning action based on the interpretation of information that has been gathered, these authors note that more research is often needed to identify and overcome barriers to change implementation (Hamilton, *et al.*, 2007). Pofi (2002) advocates combining qualitative and quantitative data collection methods in the diagnostic process to obtain a comprehensive view of the organisation, as relying only on one method imparts a partial view of the issues involved in promoting organisational change. Pofi adds that the analysis of qualitative comments of organisational members can lead to a better understanding of change processes because of their storytelling values. Cummings and Worley (2001) note that the two most commonly used qualitative methods in organisational diagnosis are content analysis and force field analysis.

Planning action based on the findings of the diagnostic process is the next step in implementing organisational change (Pofi, 2002). The main aim of this step is to develop an approach for change implementation, set goals, locate barriers to the change, and identify the critical tasks as well as resources necessary to accomplish them. Cheng, Dainty and Moore (2007) assert that the process of securing and allocating human and financial resources for the change project should be unambiguous and transparent, and this process should factor in necessary resource requirements to influence political and cultural barriers in the organisation by means of formal and informal training programmes. Elmuti (2003) further notes that outsourcing projects must specifically

consider factors such as short- and long-term benefits, performance measures, feedback and control mechanisms, performance incentives and penalties, and flexibility in anticipating change.

Generally speaking, the change strategy to make the implementation plan work must take into consideration the following situational variables: urgency of the change; clarity of the desired future state; degree and type of resistance anticipated; level of information required for design and implementation; stakeholder commitment; and the extent to which change managers depend on others in the organisation to implement the plan (Hayes, 2002). Furthermore, in an outsourcing project, Nordin (2006) states that the strategy must seek to address the following additional challenges. The first challenge concerns involving employees during the outsourcing process in order to overcome their resistance. The second challenge involves examining the long-term strategic implications of outsourcing services and identifying ways to address this challenge during outsourcing. The last challenge is about considering how the customers are impacted by outsourcing and how the relationship with the customers will be managed during the outsourcing process. Also, Khong (2005) observes that it is important to establish clear expectations of outsourcing activities, and select the right vendor for outsourcing based on criteria such as credibility, expertise and reliability.

Managing change can be a complex task and one of the major challenges facing organisations during periods of change is one of control (Hayes, 2002). The literature identifies a variety of models that change managers can use to maintain control during the change process. Among these, three models stand as exemplars in the change management literature, and they include: Kotter's eight-step strategic model for transforming organisations, Jick's tactical ten-step change model for implementing change, and General Electric (GE)'s seven-step change acceleration process model (Mento, Jones and Dirndorfer, 2002). Langvardt (2007) identifies several common elements among these three models. For instance, all three models lay emphasis on creating a vision to align organisational members with the change effort and call for institutionalising the change to embed it in the organisation's culture. Similarly, Kotter's and Jick's models stress the importance of communicating the vision to the organisation to gain the commitment of employees, although this aspect receives less attention in the GE model. Further, Jick's and GE models call attention to the role of strong leadership for the change effort to succeed, whereas Jick and Kotter emphasise the need to create a

guiding coalition (or change management team) to promote teamwork. In addition, Jick's and GE models highlight the importance of changing systems and structures, while Kotter states that such changes are a part of any effort to consolidate improvements and to produce more gains. Finally, Kotter's and Jick's models are expected to serve as a framework for a change effort implementation plan, and Jick's model, by contrast, holds that the implementation plan must be based on the unique requirements of each case.

While there is no doubt that these change management frameworks can be applied to the planning and implementation of offshore outsourcing projects, Elmuti and Kathawala (2000) stress the need for more detailed methodologies to guide managers through the process of offshore outsourcing. In addition, they note that consultant approaches to offshore outsourcing tend to highlight successes of their approaches rather than failures and problems.

3.5.3. Implementation

Change implementation involves the execution of planned actions to reach the desired future state of the organisation. As noted earlier, the literature identifies two major approaches to implementing change: top-down (planned), and bottom-up (emergent). While the top-down approach tends to be procedural, focused on resource allocation and follow formal authority lines, the bottom-up approach favours participative, consultative techniques which target the values, attitudes and skills of the organisational members (Waldersee and Griffiths, 2004). Research in recent years has supported the involvement of those affected by the change in the planning and implementation aspects of change projects (Burnes and James, 1995). Burnes and James explain that, by encouraging employee participation, the organisation is not only able to tap into the employees' knowledge of the change situation, but is also able to overcome potential resistance to, and develop a positive attitude towards, the change. Particularly in the context of offshore outsourcing, the overt and covert resistance of managers and employees can become a significant barrier to the change progress, although the negative effects of their resistance can be minimised by adjusting the implementation approach to the content and context of the change (Nordin, 2006). Resistance to change refers to the 'resistance and apprehension with regard to the transition which will have to be made in order to cope with change' (Nortier, 1995, p.34-35). For the individual organisational members, the transition may be either for better or worse and may provide an opportunity for

psychological growth or deterioration, and managers play a key role in influencing employees' perceptions of transition (Marks, 2007).

Reviewing implementation progress provides change managers with feedback essential for evaluating 'whether interventions are being implemented as intended, whether the chosen interventions are having the desired effect and whether the change plan continues to be valid' (Hayes, 2002, p.201). In an offshore outsourcing situation, performance management can aid this process by providing a basis for communicating priorities and for providing feedback to motivate employees to meet the new expectations (Cheng, Dainty and Moore, 2007). A recent report by the consulting firm NeoIT (2007, p.7) points out that many organisations undertaking offshore outsourcing projects focus their measurement and managerial attention on team-creation, training and other activities rather than on results. An effective performance management system should facilitate change by linking it with the overall strategy and support the monitoring of progress towards the ultimate goal (Cheng, Dainty and Moore, 2007). With issues such as lack of control, insufficient planning, time and capacity contributing to offshore implementation failures (Jagersma and Van Gorp, 2007), performance monitoring becomes critical to ensuring the sustained effectiveness of offshoring efforts. Clott (2007) adds that, though the implementation challenges encountered in offshore outsourcing are not any different from other implementations in that structures have to be created, employees hired, decisions made and communications established, the cross-cultural differences between the vendor and the outsourcing firm makes these offshore challenges unique.

Nelson (2003) asserts that as organisations proceed with implementing change there are two reasons why they should actively monitor and realign change initiatives. First, the external environment does not remain static while the change is being implemented. Second, internal reconfiguration could affect the style and context of change being sought by the organisation itself.

3.5.4. Institutionalisation

Anchoring changes in the corporate culture is critical to the success of any organisational change effort. Unless the new behaviours associated with the change are embedded in the organisation's norms and values, employees may revert to the old ways of doing things when the pressure for change decreases (Kotter, 1998). Kotter explains that there are two

dimensions to institutionalising change. The first is about demonstrating the links between changed attitudes and behaviours and improved performance. The second has to do with leadership succession, that is, the next generation of leadership must embrace the new working methods.

A failure to institutionalise new behaviours related to offshore outsourcing can mean that the achieved changes do not last until the objectives are fully realised. Institutionalising the change therefore requires changes to the systems and structures in order to create a fit and these changes are typically 'concerned with altering staffing, training, appraisal, communication and reward systems, as well as roles and reporting relationships, to ensure that they complement and reinforce change' (Mento, *et al.*, 2002, p.53). Such changes to organisational structures not only provide an important source of stable patterns of behaviour for the change, but also help to maintain internal and external legitimacy for the organisation (Erakovic and Wilson, 2005).

Othman and Hashim (2004) refer to institutionalisation as a process through which learning becomes embedded in the organisation's systems, structures, strategy, procedures, and culture, and new knowledge becomes permanently lodged in the organisation's memory. For these authors, success at institutionalising learning occurs when the knowledge gained is no longer dependent on the continued presence of the individual who facilitated the learning process.

Sustaining the change, which in this case refers to the routinisation of new work practices and improved performance associated with offshore outsourcing, is an interlinked and extended process that starts with change implementation and diffusion, and is subsequently followed with improvements (Buchanan, *et al.*, 2005). According to these authors, achieving change sustainability depends on two main factors, which along with the institutionalisation process, influences long-term success. The first is concerned with organisational characteristics such as the congruence of change with the organisation, stability of the social context, and trade union agreement. The second involves intervention characteristics which include specificity of goals, mechanisms of control, the level of the change target, internal support, and change champions.

3.6. SUMMARY

Despite a growing interest in the use of offshore outsourcing by firms, there has been a lack of research on how change related to this phenomenon is managed within organisations. Most of the literature on change management provides broad guidelines on how to implement and manage change, which exclude historical, contextual, social, political, and organisational factors that affect change. Similarly, change research appears to deviate largely from the complexity and analytical sophistication needed to describe change. Adopting a processual view not only helps to understand the complexities and organisational and other factors involved in managing change related to offshore outsourcing, but also attempts to fill an important gap in the literature.

4. RESEARCH METHODOLOGY

4.1. RESEARCH PHILOSOPHY

Burrell and Morgan (1979) have suggested a framework consisting of four paradigms, functionalism, interpretivism, radical humanism, and radical structuralism, for the analysis of social phenomena. Similarly, Easterby-Smith, Thorpe and Lowe (2002) have described positivism and social constructionism as the two major philosophical traditions common in management research. This two-fold classification is the one that is adopted for this study. Although these two paradigms (see Table 1 for their features) share the general empiricist understanding that knowledge results from our senses and experience of the world, there are philosophical differences between them about the nature of reality and the way in which it can be assessed. These differences, which involve a set of ontological, epistemological and methodological assumptions, lead social scientists to choose certain methodologies over others to achieve desired ends (Rowland, 1995).

Table 1. Key features of positivism and social constructionism

	Positivism	Social Constructionism
The observer	Must be independent	Is part of what is being observed
Human interests	Should be irrelevant	Are the main drivers of science
Explanations	Must demonstrate causality	Aim to increase general understanding of the situation
Research progresses through	Hypotheses and deductions	Gather rich data from which ideas are induced
Concepts	Need to be operationalised so that they can be measured	Should incorporate stakeholder perspectives
Units of analysis	Should be reduced to simplest terms	May include the complexity of 'whole' situations
Generalisation through	Statistical probability	Theoretical abstraction
Sampling requires	Large numbers selected randomly	Small numbers of cases chosen for specific reasons

Source: Adapted from Easterby-Smith, Thorpe and Lowe (2002), p.30

4.1.1. Characteristics of Positivism

Positivism has firm roots in the tradition of sociological positivism and treats its subject matter from an objectivist standpoint. It takes a problem-oriented approach to understand organisations and society and is concerned with 'providing explanations of the status quo, social order, consensus, social integration, solidarity, need satisfaction and actuality' (Burrell and Morgan, 1979, p.26). Positivists emphasise the importance of understanding order, equilibrium and stability and the way in which these can be maintained in society and organisations (Burrell and Morgan, 1979). According to Burrell and Morgan (1979), the positivist paradigm houses various schools of thought and these schools generally favour the use of mechanical or biological analogies to model and understand the social world.

At a basic level, positivists believe that valid knowledge can only be gained from observable experience and they consider anything beyond this realm to be metaphysical. To the positivists, the study of social affairs can be value free and 'the social world is composed of relatively concrete empirical artefacts and relationships which can be identified, studied and measured through approaches derived from the natural sciences' (Burrell and Morgan, 1979, p.26).

In terms of ontology, the position adopted by the positivist is one of realism (Crotty, 1998). Realism assumes that the social world is real, made up of hard, intangible structures that exist irrespective of our individual descriptions. Thus, the social world is real and exists separate from the individuals' perception of it. The positivist epistemology is basically objectivist (Crotty, 1998). The positivist approach holds that it is possible to attain true objectivity as an external observer, and one can seek to explain and predict what happens in the social world by searching for patterns and relationships between people.

To the positivists, the purpose of science is to derive knowledge through observation and measurement. The positivist view of human nature is deterministic, meaning that it regards humans and their activities as determined by the environment. Finally, the positivist approach takes a nomothetic approach to social science, which relies on experimental or quantitative methods such as surveys to test and verify hypothesis.

4.1.2. Characteristics of Social Constructionism

Social constructionism, which arose in reaction to positivist social science, posits that the social world differs from the natural, physical world and should it should therefore be studied differently (Patton, 2002). According to Crotty (1998, p.42), social constructionism holds the view that:

> [A]ll knowledge, and therefore all meaningful reality as such, is contingent upon human practices, being constructed in and out of interaction between human beings and their world, and developed and transmitted within an essentially social context.

It assumes that knowledge and truth are created, not discovered by human beings (Schwandt, 1994). In addition, it conceives of a world where there is no single reality, but multiple realities exist and these are formed in the minds of individuals. From the social constructionist perspective, all perceptions of reality are socially constructed, and social realities in turn are a function of shared meanings that are produced, sustained and reproduced through social interactions (Crotty, 1998). The social constructionists believe that knowledge and meaning are acts of interpretation, and objective knowledge that is independent of human perception is not possible (Gephart, 1999). Another important assumption of social constructionism is that, unlike positivism, it accepts the inseparable bond between values and facts in attempting to understand social reality (Woods and Trexler, 2001).

The focus of social constructionism is on the collective generation of meaning and thus 'emphasises the hold our culture has on us: it shapes the way in which we see things...and gives us quite a definite view of the world' (Crotty, 1998, p.58). It views culture as the source of human thought and behaviour, not as its result (Crotty, 1998). Further, it considers all knowledge to be local, transient and provisional, and believes that knowledge is negotiated between people within a particular context and time frame (Raskin, 2002). In taking this view, it draws attention to the use of language and conversations between social actors in their efforts to construct their own meanings (Easterby-Smith, *et al.*, 2002). Language, for the social constructionists, 'both creates and reflects social realities – and thus is essential to what makes us human' (Cohen, Duberley and Mallon, 2004, p.41). It is regarded as the intersubjective medium through which individuals construct knowledge of the social world and the self (Ritson, 2002). Consequently, all knowledge derives from the use of language in social interactions

(Burr, 2003). This social construction of knowledge is achieved through historical and social reflections on how knowledge is understood in communicative interaction (Pearce, 1995; Yerby, 1995). In elaborating the role of language in the construction of social knowledge, Gergen and Gergen (1991, p.78) state that:

> [Social constructionism] draws attention to the manner in which the conventions of language and other social processes (negotiation, persuasion, power, etc.) influence the accounts rendered of the 'objective' world. The emphasis is thus not on the individual mind but on the meanings of people as they collectively generate descriptions and explanations in language.

The social constructionists understand language as constitutive of reality and therefore view our experiences of reality as necessarily interpersonal (Ritson, 2002). In other words, the way in which people talk about themselves and their social world determines the nature of their experiences (Raskin, 2002). Burr (2003, p.13) explains:

> [The social constructionists'] account of social life argues that human beings together create and then sustain all social phenomena through social practices. They show how the world can be socially constructed by social practices of people but at the same time experienced by them as if the nature of their world is pre-given and fixed.

Consequently, knowledge involves both personal and social construction of experiences, and it depends on the individuals involved and on how they perceive, process and interpret meaning in a given situation (Renzl, 2007). This is not to suggest that meanings are created and imposed on reality (Crotty, 1998), but rather meanings are constructed through social interactions which are shaped through personal experiences. Thus, from a social constructionist standpoint, one must study the interpersonal and linguistic interactions of individuals as well as the environment within which they are situated in order to understand social reality (Ritson, 2002).

With regard to human nature, social constructionism takes the view that humans create their own environment and therefore the environment is open to be changed. When it comes to methodology, it seeks to understand meaningful social action by exploring 'the subjective meanings motivating people's actions in order to be able to understand these' (Saunders, Lewis and Thornhill, 2003, p.84). The ultimate goal of the social constructionist methodology is to distill 'consensus among informed and sophisticated constructors' (Patton, 2002, p.96). Social scientists in this paradigm usually apply qualitative methodologies such as ethnography, phenomenological research, discourse

analysis, grounded theory, and interpretive case study in their research to gain a deep understanding of the participants' viewpoints. Data collection methods include, for example, in-depth interviews, participant observation and document reviews. Analysis involves texts as raw data, and such texts can be generated through stories, interviews, participant observations, diaries, literature, letters or other relevant documents (Byrne, 2001). Using content analysis, for example, core meanings that are called themes or patterns can be identified from the raw data, and these themes or categories communicate findings that reflect knowledge of the phenomenon under study (Byrne, 2001).

The assumptions underlying the social constructionist paradigm were of interest to this study of organisational change and they stem from the author's beliefs about the purpose of research, nature of social reality and the nature of knowledge. To understand how change is managed in organisations, which is a complex social phenomenon, the social constructionist paradigm was found suitable because it allows the researcher to focus on shifting, multiple and emergent social realities that shape organisational form, structure and activity. A social constructionist approach to the task at hand not only challenges the dominant positivistic methods by rejecting the objectivist view of reality, but also offers alternative theoretical, methodological and practical approaches to research on management and organisations (Gephart, 1999). Further, in business and management contexts, the situations studied are most often unique and complex and these situations are a function of a particular set of circumstances and individuals (Saunders, *et al.*, 2003). Traditional positivistic methods are often inadequate to study these complex situations because they require the researcher to be detached from the organisation in order to conduct the research objectively. By contrast, the social constructionist approach, which emphasises 'making sense of ambiguous and complex situations through conversations and dialogue' (Easterby-Smith, *et al.*, 2002, p.6), allows the researcher to conduct the inquiry from within the organisation by being part of the phenomenon studied.

4.2. THEORETICAL PERSPECTIVE: INTERPRETIVISM

The implications of the social constructionist paradigm to understanding organisational change are significant. By asserting that social phenomena originate from human action, it emphasises the process of bringing organisational realities into being through the process of interpreting and reinterpreting them (Crotty, 1998). This interpretive approach privileges *Verstehen* (i.e. understanding) over explanation, and it has historically appeared under three streams: hermeneutics, phenomenology and symbolic interactionism (Crotty, 1998). As a theoretical perspective, the goal of interpretivism is to develop culturally derived and historically situated interpretations of the social world (Crotty, 1998). It 'stresses understanding that focuses on the meaning of human behaviour, the context of social interaction, an empathetic understanding based on personal experience, and the connections between mental states and behaviour' (Patton, 2002, p.52). Thus, interpretive research seeks to understand the subjective reality of organisational actors in order to be able to make sense of and understand their motives, actions and intentions in a way that is meaningful for these actors (Saunders, *et al.*, 2003).

It follows from the above discussion that the task of the interpretive researcher involves continuous engagement in a process of interpretation and reconstruction of organisational reality based on the constructions of those interviewed or observed (Flick, 1998). The empathy that develops as a result of direct personal contact with the research participants enables the researcher to 'understand the stance, position, feelings, experiences, and worldview of others' (Patton, 2002, p.52). The researcher is thus able to get as close as possible to the meanings attributed to the various words and actions by the research participants. To understand the interpretive acts of social actors, research in this tradition emphasises communication and other forms of interaction to understand human thought and action in organisational situations. With metaphors such as sense making, text and language game, research focuses on understanding and interpreting how construction of meaning through symbolic media occurs in organisations (Boyce, 1996).

In accepting the principles of interpretivism to understand organisational change, one is required to embrace a relativist ontology, which states that 'we need to recognise that different people may well inhabit quite different worlds. Their different worlds constitute for them diverse ways of knowing, distinguishable sets of meanings, separate realities' (Crotty, 1998, p.64). Moreover, with these realities differing across time and place, truth

is seen as requiring consensus between different viewpoints and facts as depending on the viewpoint of the observer (Easterby-Smith, *et al.*, 2002). For the present study, this means that the research participants would have experienced and perceived organisational change related to offshore IT outsourcing differently, 'all of which deserve attention and all of which are experienced as real' (Patton, 2002, p.98). Consequently, the objective of this study becomes capturing the different perspectives of these research participants and interpreting their multiple realities with regard to the organisational change phenomenon.

Similarly, the interpretive perspective emphasises a subjectivist epistemology, which holds that organisational reality is socially constructed and is based on subjective interpretation. It implies that meaning construction takes place in a social, cultural and historical context, and it involves the researcher's engagement with the social world. In the context of this study, this means that individual constructions have to be elicited and refined through interaction between the researcher and research participants in an organisational setting, and that the findings will be a product of the process of interaction between the two, with limited generalisability. Further, the recognition that the researcher cannot be separated from the meaning-making process implies that the theories which apply to the research subjects must also be relevant to the researchers themselves (Easterby-Smith, *et al.*, 2002).

A major criticism of the interpretive approach is that the contextual and subjective nature of research may inherently bias the findings. It is therefore important for the researcher to 'carefully reflect on, deal with, and report potential sources of bias and error' in order for the research to be credible (Patton, 2002, p.51). Although it is possible to minimise bias, it is impossible to fully eliminate this source of error. Notwithstanding this limitation, the interpretive approach is particularly well suited to understand the complex role of language in shaping organisational realities because of its ability to consider the *temporality* and *contextuality* of organisational constructs, which are linguistically pre-constituted (Thatchenkery, 1994).

A survey of management literature indicates a recent increase in the number of studies that adopt interpretive approaches to research. Llewellyn (1993) claims that interpretive approaches are appropriate for the analysis of transitional periods, such as change, in organisational fields. Furthermore, Barry (1997) points out that interventionist approaches informed by interpretive, constructivist and symbolist views have recently gained currency in organisational change research and these approaches underscore the

significance of *understanding* in the change process. Change researchers adopting these approaches work from the premise that 'if organisational members can better understand how they construct themselves and their organisations, they will be better able to address their problems' (Barry, 1997, p.31). In so doing, researchers are able 'to look at how change processes over time, to understand people's meanings, to adjust to new issues and ideas as they emerge, and to contribute to the evolution of new theories' (Easterby-Smith, *et al.*, 2002, p.42).

In addition, the emphasis placed on understanding human actions and settings makes the interpretive approach also very relevant to the concerns of professional practitioners, including policy makers (Murphy, Dingwall, Greatbatch, Parker and Watson, 1998). For the author, who is a practitioner-researcher, the interpretive approach offered the ability to 'concentrate on exploring in much greater depth the nature and origins of people's viewpoints, or the reasons for, and consequences of, the choice of corporate performance criteria' (Easterby-Smith, *et al.*, 2002, p.3).

Thus, the aim to understand management of organisational change related to offshore outsourcing through the meanings that organisational members assign to their activities and actions required the adoption of interpretive assumptions and methods.

4.3. METHODOLOGY

4.3.1. Approaches to Social Science Research

A common way in which approaches to research are classified in the social sciences is by drawing a distinction between quantitative research and qualitative research. While quantitative research tends to make use of large samples and statistical procedures to determine whether the predictive generalisations of a theory hold true, qualitative research usually utilises small samples and seeks to understand social phenomenon from different perspectives. These two research approaches are informed by different philosophical perspectives (discussed in Section 4.1) which hold distinct assumptions regarding what constitutes scientifically valid social research and which methods are appropriate to the research being conducted. Despite the clear differences between them, both approaches share several common features. For example, both require the researcher to undertake careful planning of research activities, follow ethical codes, employ

appropriate sampling techniques, and use integrity when it comes to the presentation and interpretation of data, among other things.

Both quantitative and qualitative approaches have their own strengths and weaknesses, depending on the research question under investigation. For example, a key strength of the quantitative approach is that it collects numerical data which is easier to analyse. A major weakness of the quantitative approach is that it tends to strip contexts from the meanings in the process of developing quantified measures of social phenomena (Guba and Lincoln, 1994). On the other hand, the qualitative approach collects rich and detailed data which capture the participants' perspectives and provides a context for their behaviour. An important limitation of the qualitative approach is that it is difficult to analyse, compare, or draw precise conclusions from qualitative data. In addition, there may be a risk of bias in the way the researcher collects and interprets qualitative data. The implications of these two approaches for doing social research are summarised in Table 2.

Given the aim of this study, which is to understand the little-studied social phenomenon of organisational change related to offshore IT outsourcing implementation, the qualitative approach was the most appropriate one to use. The qualitative approach allows 'the researcher to discover new variables and relationships, to reveal and understand complex processes, and to illustrate the influence of the social context' (Shah and Corley, 2006, p.1824). It can thus lead to a better understanding of any phenomenon about which little is known (Strauss and Corbin, 1990). Further, the qualitative approach can be appropriate in situations where the researcher has determined that quantitative measures cannot adequately describe or interpret a phenomenon.

Table 2. Methodological implications of quantitative and qualitative approaches

Elements of Methods	Quantitative	Qualitative
Aims	Discovery	Invention
Starting points	Hypotheses	Meanings
Designs	Experiment	Reflexivity
Techniques	Measurement	Conversation
Analysis/Interpretation	Verification/Falsification	Sense-making
Outcomes	Causality	Understanding

Source: Adapted from Easterby-Smith, Thorpe and Lowe (2002), p.34

4.3.2. Qualitative Research Methodologies

Prior to introducing the research methodology and techniques utilised in this study, it may be useful to review the main features of some of the key qualitative methodologies used within organisational and management research, highlighting their respective strengths and weaknesses. These methodologies include case study, action research and grounded theory. It is important to note that these qualitative methodologies are paradigm agnostic and can be employed from different philosophical perspectives.

The case study methodology involves examining one or a small number of organisations in depth over a period of time (Easterby-Smith, *et al.*, 2002). Case studies may be positivist or social constructionist in nature, depending on the philosophical assumptions of the researcher, the type of data collected and the analytical techniques used. A key advantage of case studies is that the researcher is able to examine a number of variables in specific context than is usually possible with experimental or survey research, thus offering a holistic and rich understanding of the phenomenon in real-life settings. Case studies can be useful in testing existing theories, in challenging current theories, or in providing a source of new hypotheses (Saunders, *et al.*, 2003). A major limitation of case studies is that they provide little basis for generalisation. Despite this limitation, case studies have a strong tradition in social science disciplines, including business and management.

Action research is a methodology which is undertaken with the intent that the research will inform and change one's practice. It can be positivist or social constructionist, and is designed and conducted by practitioners who analyse the data to improve their own practice. It aims to resolve the practical concerns of people by developing solutions, while at the same time attempting to generate new theoretical knowledge. In action research, the researcher applies problem solving actions in the entity that is being researched, and then examines the outcomes on the entity and on the researcher themselves. As with case studies, an important limitation of action research is that it usually involves a single organisation and thus makes it difficult to generalise findings. In the field of management, action research is frequently adopted by organisational development practitioners who work with groups in order to improve their effectiveness (Easterby-Smith, *et al.*, 2002).

Grounded theory takes an inductive approach to research and aims to systematically generate theory from data. The idea is to develop a theoretical account of a phenomenon,

identifying the major constructs, their relationships, and the context and process. Grounded theory requires researchers to start the research without a theory, and to continuously compare and contrast data in order to discover emergent theory. In the positivist tradition, grounded theory aims to confirm and validate or falsify the hypotheses, as well as to uncover relationships among variables, which is in contrast to its uses in social constructionist research where the goal is to understand important distinctions and patterns in participants' meanings (Gephart, 1999). In terms of limitations, grounded theory requires the application of a series of procedures which can be a painstaking and time consuming process for the researcher. Since the 1970s, grounded theory has steadily gained acceptance as a valid research method in the social sciences, and it is perhaps the most recognised analytical technique in management research (Shah and Corley, 2006).

4.3.3. Justification for Using the Case Study Methodology

A key challenge for this study had been to identify a research methodology that is able to both capture the complexity of the organisational phenomenon being investigated and identify and examine not only the major components of the phenomenon, but also the connections between them. Given this challenge, the case study methodology was thought of as providing both the richness and depth of information not usually offered by other qualitative methodologies, and as having the ability to capture many variables in order to identify how a complex set of circumstances come together to produce a particular manifestation (Hancock, 1998). Further, Yin (1989) finds the use of the case study methodology appropriate when organisational and managerial issues need to be examined.

A case study is defined as a study that 'investigates a contemporary phenomenon within its real-life context especially when the boundaries between phenomenon and context are not clearly evident' (Yin, 1994, p.13). Case studies can make an important contribution by providing a rich understanding of the context of research and the process being enacted (Saunders, *et al.*, 2003) as opposed to a reductionist-fragmented view that is often used (Patton and Appelbaum, 2003).

Benbasat, Goldstein and Mead (1987) consider the case study methodology viable for the following three reasons:

1) It is necessary to study the phenomenon in its natural setting;
2) The researcher can ask *how* and *why* questions, in order to understand the nature and complexity of the processes taking place; and
3) The research is being conducted in an area where few, if any, previous studies have been undertaken.

Case study methodology is multi-faceted and it can accommodate a range of research paradigms, disciplines and philosophical perspectives (Merriam, 1998). Researchers employing the case study methodology collect data about a small group of purposively chosen participants using interviews, observation and documents to develop a holistic understanding of a phenomenon. This understanding is arrived through a process known as thick description which involves describing the phenomenon in sufficient detail, providing as much context as possible.

Keeping in spirit with the social constructionist beliefs, an interpretive case study, applying qualitative research methods, was adopted for this research. In the interpretive tradition of case study research, the researcher aims to 'understand a phenomenon, a process, the perspectives and worldviews of the people involved, or a combination of these' (Merriam, 2002, p.6). Data is typically collected from multiple sources and is inductively analysed to identify themes, patterns and categories in the data. Finally, reliability and validity in interpretive case study research are assessed in context rather than against an external and objective standard (Winegardner, 2001).

4.3.4. Case Study Types

There are several methods and approaches to conduct case study research. For example, Yin (2003b) has proposed the following classification: exploratory, descriptive and explanatory case studies. An exploratory case study is undertaken when the available literature or existing knowledgebase is poor. Descriptive case studies aim to provide rich, detailed description of a phenomenon from which observations are made. Finally, explanatory case studies seek to provide causal explanations.

A descriptive approach seemed appropriate for this study because the goal is to gain familiarity with a phenomenon and to provide readers a common language about the topic in question. Descriptive case studies require a theory to guide data collection and this theory should be openly stated in advance.

Regardless of the type of case study chosen, Yin (1994) recommends the following steps for conducting the case research successfully:

1) Define the research questions;
2) Case selection, define data collection and analysis techniques;
3) Conduct case study;
4) Analyse data; and
5) Report writing.

4.3.5. Theory in Case Study Design

Theory development is essential for descriptive studies during the design phase regardless of whether the case study's purpose is to develop or test theory (Yin, 2003b). Although not all qualitative studies aim either to develop or test theory, theory development does provide a clear blue print for the research, which can help determine what data to collect and what strategies to employ to analyse the data (Yin, 2003b). In some cases, existing theories could provide this theoretical framework, while in others, a descriptive theory is appropriate. For the current study, the generic process model introduced in Chapter 3 formed the theoretical framework for covering the depth and scope of the cases to be investigated. Yin (1993, p.4) states that the 'good use of theory will help delimit a case study inquiry to its most effective design'.

4.3.6. Case Study Design

Case studies can follow either a single or a multiple-case design, and when a multiple-case design is used, it must adhere to a replication rather than sampling logic (Tellis, 1997a). Without regard to the design adopted, generalisation of results is made to theory (i.e. analytical generalisation) and not to populations (Yin, 2003b).

A multiple-case design was selected for this study because evidence from multiple cases is generally regarded as more compelling and is thus believed to increase the robustness

of the overall study (Yin, 1994). In a multiple-case design, a theory is tested through replications of the findings in subsequent case(s), thus leading to analytical generalisation. The logic is that the case selection will either replicate (literal replication) or produce contrasting results (theoretical replication) in line with the existing theory. While similar results explain the conditions under which a particular phenomenon is likely to be found, contrasting results explain the conditions when the phenomenon is not likely to be found.

With respect to the number of acceptable cases to be used in a multiple-case design, the opinions of researchers appear to vary. The consensus appears to fall between two to four as the minimum and ten, twelve or fifteen as the maximum (Perry, 1998).

4.3.7. Case Selection

The identification of cases for in-depth study should be conducted with great care. One of the main issues with finding suitable cases for the present study was that, at the time of this study, the concept of offshore outsourcing was fairly new within the company and therefore not all information systems departments were participating in the offshore initiative at the same level. While some of these departments were active participants in this initiative, others were simply investigating the potential for offshoring. Because the aim of this study is to understand the nature and process of change related to the implementation of offshore IT outsourcing, it was necessary to limit the selection of cases to those departments that were fully engaged in the offshore initiative (i.e. these departments had planned to offshore at least two or more IT projects or services). By selecting homogenous cases, the aim was to compare and contrast findings across the cases. Eisenhardt (1989, p.537) notes that 'cases may be chosen to replicate previous cases or extend emergent theory, or they may be chosen to fill theoretical categories and provide examples of polar types'. Thus, three out of the five information systems departments in the company were selected for the current study. They include the R&D Information Systems Department, the Sales & Marketing Information Systems Department and the Corporate Information Systems group. The author expected these three cases to yield similar results, even though they are independently operated and the context for change varies between them.

4.3.8. Unit of Analysis

In case study research, the unit of analysis is a critical factor (Tellis, 1997b). The unit of analysis is the major entity that is being analysed by the research. The unit of analysis in a case study is the actual case, which can range from an individual to an entire country (Patton, 2002). When there are multiple units involved, 'case analysis is the idea that the objects of investigation are similar enough and separate enough to permit treating them as comparable instances of the same general phenomenon' (Ragin, 1992a, p.1).

For this study, the three information systems departments mentioned earlier formed the units of analysis, but within it, employees at three different levels (i.e. senior managers, middle managers and non-managerial employees) were analysed as embedded units. Each of the three case studies examined the change process situated in an organisational context as its unit of analysis. According to Yin (1994), in a multiple-case design, defining the unit of analysis assists with replication as well as comparison of cases.

4.4. METHODS

4.4.1. Data Collection

Case study research generally involves multiple data collection methods. Collecting different types of data through different methods ensures a broad scope of coverage and results in a fuller picture of the phenomena under study (Bonoma, 1985). This study relied on semi-structured interviews, direct observation and document analysis as the sources of data in order to gain an in-depth understanding of the dynamics of change related to implementing offshore IT outsourcing. Data collected for this study was stored, organised and managed in a case study database (Yin, 1994) that was housed in a personal computer system at the author's residence. The computer system was secured by a password and the data was backed-up using compact disks. Electronic versions of corporate documents were stored in the file system of the computer, while interview and observation data were stored in a database (with additional password protection) in the same computer for easy retrieval and analysis using EZ-Text qualitative analysis software (Carey, Wenzel, Reilly, Sheridan and Steinberg, 1998). For those corporate documents that were not available electronically, paper copies were obtained and these were organised and stored securely in a filing cabinet at the same location.

4.4.1.1. Semi-structured Interviews

Interviews are one of the most important sources of case study information, according to Tellis (1997b). A semi-structured interview approach was found suitable for this study because it can yield unexpected and insightful information, thus enhancing the findings (Hair, Babin, Money and Samouel, 2003). A large part of the data was gathered through semi-structured interviews with staff members who were directly involved in planning and implementing the offshore IT initiative in each of the three case organisations. A purposeful sampling strategy (Patton, 2002) enabled the selection of interviewees from these organisations. Within each case organisation, responses were obtained from interviewees at three different managerial levels: senior managers (including the sponsors of the offshore initiative); middle managers; and non-managerial employees. A total of 21 interviews were conducted for the study (see Appendix A for the list of study participants by each case), and each interview typically lasted between 45 minutes and one hour.

Every effort was made to ensure that the interviewee sample was drawn in such a way that it adequately represented the different managerial levels of the case organisations. Despite the author's best efforts, it was not possible to interview middle managers in the Corporate Information Systems group due to repeated scheduling conflicts and other business priorities, such as business travel, of these managers. Daniels and Cannice (2004) have noted that managers with international responsibilities tend to travel a great deal and therefore scheduling interviews with them is often difficult.

Overall, five senior managers, including one of the two sponsors of the offshore initiative, were interviewed as part of the pilot study that was conducted during the taught session (Advanced Business Research Methods module) of the doctoral programme. An interview guide (Appendix B), which consisted of open-ended questions structured around the study's research question and objectives, provided the focus for the interviews. The interview guide was developed based on a review of current change management literature, and the interview questions were grouped into three topic areas: change drivers; organisational components involved in managing change; and effects of change. Prior to the interviews, the author field tested the interview guide with the help of two colleagues from the R&D Information Systems Department and their feedback was used to refine the interview questions. This interview guide from the pilot study was slightly modified (see Appendix C) for the subsequent interviews with five middle managers and 11 non-

managerial employees, which were conducted during the research phase of the doctoral programme. More specifically, the modification included an additional question about the success factors critical to the particular offshore projects in which the middle managers and the non-managerial employees were involved. This question was intended to find out whether there were any differences between change success factors at the organisation level versus those at the project level. The interviews were tape-recorded when permitted by the interviewees. In some cases, the participants did not feel comfortable about tape recording the interviews. In such situations, the interviews were not tape-recorded but documented with handwritten notes. The author then transcribed the interviews on the same day or the next day using a standard word processing programme (see Appendix D for sample transcript), and entered the transcribed data into the EZ-Text database for coding and analysis.

4.4.1.2. Direct Observation

Direct observation was thought of as providing an additional source of information about the offshore change initiative. As a method of data collection, it has several advantages: the researcher is able to 'understand and capture the context within which people interact', and the researcher 'has the opportunity to see things that may routinely escape awareness among the people in the setting' (Patton, 2002, p.262). In this study, the author assumed an overt non-participant observer role in the R&D Information Systems Department, where he works as a project manager. In such a role, the researcher refrains from becoming involved in the situation under assessment in order not to influence it.

Using a purposive sampling approach, direct observations were made, through weekly staff meetings and project-related meetings, of six staff members in the R&D Information Systems Department who were directly engaged in the offshore initiative. In the author's experience, assuming a non-participant observation role was often difficult to enforce because co-workers viewed the author as a member of the organisation and expected him to fully participate in organisational activities such as meetings.

The direct observations focused on the context in which the offshore programme staff operated and the interrelationships between the staff. The observations were recorded as field notes with the help of a standard word processing programme, and the notes were entered into the EZ-Text database subsequently for coding. During the analysis, the data

from observation was used in a corroborative mode to cross check information, and to identify any differences between what people say they do and what they actually do.

4.4.1.3. Document Analysis

In organisational fieldwork, documents can provide important information about many things that cannot be observed, including things that took place before the research began (Patton, 2002). Documents not only provide a good source of basic information, but are also necessary to ensure that important data is not overlooked and to compare data from different sources (i.e. interviews and observation) to see if the findings are consistent.

For the present study, documents from both company as well as pharmaceutical industry sources provided valuable information on contextual factors influencing the change, and presented a historical view of how the company envisioned the offshore initiative would be implemented. Documents that were analysed include: budget and financial records, PowerPoint presentations, meeting minutes, standard operating procedures, annual reports, specialised reports of various kinds, industry reports, electronic mail, request for proposals, organisational charts, resource allocation plans and strategy plan documents, among others.

4.4.2. Data Analysis

Data analysis in case study research follows an iterative process, proceeding from more general to specific observations (Creswell, 1998), and analysis may start during the data collection phase and continue through the data transcription stage, when themes, patterns and categories become apparent. Case studies generally tend to produce large amounts of data that do not readily respond to mechanical manipulation, analysis, and data reduction (Yin, 2003b). In order to treat this data fairly, develop sound conclusions and rule out alternative interpretations, case researchers need to employ a mixture of strategies to analyse the data (Ghauri, 2004). The data analysis for the present study consisted of three distinct stages, and the strategies and techniques adopted during each of these stages are described hereunder.

4.4.2.1. Template Analysis

The first stage of analysis entailed segmenting the data into manageable units by the process of coding and subsequently organising the data into conceptual categories. Pare (2002) states that coding enables the rapid retrieval and clustering of all the segments related to a particular question, concept or theme. King (1998) offers an inductive strategy known as template analysis that combines a deductive and an inductive approach to qualitative data analysis. In template analysis, a pre-determined template of codes is first derived deductively using existing literature or theory and this template is subsequently modified as the data collection and analysis proceeds. By using themes from the literature, the researcher can expect the critical issues in relation to the topic being researched to arise in the data (King, 1998). The analytical technique here involves unitising data according to the most current list of codes to identify themes, patterns and relationships, and arranging the codes and categories in a hierarchical manner to aid the analytical process (Saunders, *et al.*, 2003).

For this study, template analysis represented an ideal strategy for coding interview and observation data because it was flexible and ensured consistency with the theoretical constructs of this study. First, a set of themes and codes were developed based on the literature, which were used to perform initial coding of a few transcripts (2 transcripts were selected for this purpose from each of the three cases), following a manual process. As this initial coding proceeded, new themes and codes were discovered and these were added to the template, or existing ones modified. This resulted in an initial coding template (Appendix E) which was applied to all the transcribed data through electronic coding using the EZ-Text software. The initial coding template went through subsequent changes when the data did not fit well into an existing theme or code. This process was repeated until all transcribed data was coded and analysed, resulting in a final coding template (Appendix F). This final template then provided the basis for representing and exploring key themes and relationships in the data.

4.4.2.2. Within-Case Analysis

The next stage of the analysis involved understanding how things are developing and why things happen the way they do (Ghauri, 2004). This was accomplished by constructing a case description and interpretation using the within-case analysis technique (Miles and

Huberman, 1994). This technique helps to reduce the large volume of data, and involves developing case study write-ups that identify the different component parts of a phenomenon and interpreting the relationship among these component parts. It involves telling a story of a situation and progress in a chronological order so that 'we can construct a map and locate different elements and variables' (Ghauri, 2004, p.118). Without this story telling, it will be difficult to develop interpretations that track a phenomenon over time (Ghauri, 2004). Through this within-case analysis process, the unique patterns within the data for each case can be identified, and the familiarity thus gained, with each case, can help to accelerate comparison across cases (Eisenhardt, 1989).

The within-case analysis in this study attempted to combine data from all three sources (interviews, observations and documents) to produce detailed case descriptions and interpretations of the change process related to implementing offshore IT outsourcing in each of the three information systems departments studied. The study's theoretical framework (i.e. generic process model of change) not only guided the analysis, but also provided the basis for organising the case studies. In order to facilitate the cross-case analysis that was to follow, all three cases were described using the same format. As the next step, these case study reports were sent to at least two key informants in each case organisation for feedback and comments. Based on their feedback, the case study write-ups were revised.

4.4.2.3. Cross-Case Analysis

The last stage of the analysis entailed searching for similarities and differences across cases. Eisenhardt (1989) observes that cross-case analysis forces researchers to look beyond initial impressions and view evidence through multiple lenses. Miles and Huberman (1994) and Eisenhardt (1989) offer several techniques that can assist the researcher in the search for patterns in multiple cases. One such technique is where the researcher first selects categories or dimensions, which are based on the literature or the research problem, and then looks for within group similarities as well as inter-group differences along these categories or dimensions.

The cross-case analysis of this study utilised the four dimensions from the generic process model of change (i.e. context, diagnosing and planning, implementation and institutionalisation) to compare the cases. Cross-case matrices were constructed for each

of the four dimensions and the data from the three cases were analysed simultaneously. Finally, the results of the cross-case analysis were compared with established theoretical statements because these results, especially in isolation from other knowledge, can be very misleading (Ragin, 1992b).

4.5. VALIDITY AND RELIABILITY

According to Yin (2003b), there are four tests that are commonly used to establish quality in case study research. They are:

1) Construct validity;
2) Internal validity;
3) External validity; and
4) Reliability.

Construct validity, which requires the researcher to use the correct measures for the concepts being studied (Yin, 2003b), was established in this study in two ways. First, multiple sources of data were collected for each case under investigation in order to increase construct validity. Second, the author engaged in peer consultations to gather feedback on draft case studies from the key informants in each case (see Appendix G for details of feedback). This process provided the opportunity to verify that the author's interpretation is an adequate representation of reality.

Internal validity in case study research is concerned about whether the interpretations made by the researcher are correct when the event cannot be directly observed (Yin, 2003b). In this study, the problem of determining internal validity was addressed using the following strategies. First, a logical chain of evidence was established by having sufficient citations and quotes in the case studies. By maintaining a logical chain of evidence, the reader can follow the derivation of any evidence from the initial research questions to the final conclusions, and will also be able to trace the steps in either direction (i.e. from conclusions to the research questions and vice-versa) (Yin, 2003b). Second, triangulation of different sources of evidence was an important way of increasing the internal validity of the findings in this study. The data from different sources was used in a convergent manner, and convergence was obtained by asking the same questions of all the data sources. According to Tellis (1997b), triangulation increases the reliability of

the data and the need for triangulation in case study stems from the ethical need to confirm the validity of the processes. Finally, the comparison of cross-case results with both similar and conflicting literature (Pare, 2002) helped to enhance internal validity of the findings.

External validity in case study research involves establishing domains to which a study's results may be generalised. This can be established in multiple case studies through the use of replication logic in case selection, as well as through analytical generalisation in which the researcher generalises the results to some broader theory (Yin, 2003b). By replicating findings in all three cases as well as by generalising (analytical) the results of the cross-case analysis to a broad range of theoretical issues related to management of organisational change, this study attempted to sharpen external validity. Another strategy adopted for increasing external validity was to have the study results reviewed by a leading a management consulting firm with expertise in offshore outsourcing in the pharmaceutical industry (see Appendix G).

The last test, reliability, deals with the extent to which other researchers would arrive at the same conclusions if they were to use the same data and methods. Yin (2003b) offers two strategies for increasing reliability in case study research: using a case study protocol, and developing a case study database. A case study protocol is essential in a multiple-case study, and it typically contains the following elements: i) overview of the case study project (research questions, objectives, topic being investigated); ii) field procedures (access to sites, sources of information); iii) interview guides and other research instruments; and iv) a guide for the case study report (outline, format for narrative, bibliography) (Yin, 2003b). For this study, the author's doctoral research proposal (Appendix H) served as the case study protocol and it contains the key elements described by Yin. Further, to increase reliability, the author created a case study database utilising the EZ-Text software which helped to store and manage the transcribed interview and observation data and the coding scheme. In addition, electronic versions of corporate documents were organised and stored in the file system of the author's personal computer, and paper copies of company documents were organised and stored in a filing cabinet.

Table 3 summarises the different tactics used for ensuring validity and reliability in this study.

Table 3. Case study tactics adopted for establishing quality

Tests	Case Study Tactics	Tactics adopted in this study
Construct validity	Use multiple sources of evidence	Interviews, observation and documents were used.
	Have key informants review draft case study report	Peer feedback was obtained on all case studies.
Internal validity	Establish chain of evidence	Use of sufficient citations and quotes in the case studies
	Triangulate evidence	Use of different data sources in a convergent manner
	Compare results with extant literature	Cross-case results compared with similar and conflicting literature
External validity	Follow replication logic in multiple case studies	Replication logic used to investigate all three cases.
	Analytic generalisation	Cross-case results generalised to broader theories in organisational change management.
	Expert review of findings	Results of the study were reviewed by an expert in offshore outsourcing in the pharmaceutical industry.
Reliability	Use case study protocol	The author's doctoral research proposal (Appendix H) contains the recommended elements of a case study protocol; same data collection and analytical procedures followed for each case.
	Develop case study database	Transcribed interview and observation data were entered into EZ-Text database; corporate documents (electronic version) organised in the computer's file system; hard copies of company documents organised by each case.

Source: Yin (2003b), Pare (2002) as compiled by the author

4.6. LIMITATIONS OF THE METHODOLOGY

4.6.1. Research Methodology Limitations

A frequent criticism levelled against case study research is that it is difficult to generalise findings to a population beyond cases similar to those studied. The counter argument to this is that generalisation of case study findings is a legitimate outcome, based on an understanding of the nature of that generalisation (Winegardner, 2001). For Yin (2003), statistical generalisation is less relevant for doing case studies and the mode for generalising case study results is through analytic generalisation. Furthermore, in organisations, a number of issues are related to the intersection of human agents and organisational structures (Patton and Appelbaum, 2003) and case studies are able to produce much more detailed information about these issues than statistical analyses.

For this study, statistical generalisation was not an objective but understanding the complex interrelationships among the elements present in the case (Stake, 1995). However, with the use of multiple cases, the study aimed toward analytical generalisation, an approach in which previously developed theory is used as a template with which to compare the results of the case study (Yin, 2003b).

4.6.2. Other Limitations

Yet another limitation is that some study participants, particularly from the middle manager and non-managerial employee categories, felt uncomfortable about tape recording the interviews. The reluctance of these participants to have their interviews taped could have been caused in part by the fact that offshore outsourcing remains a controversial and sensitive issue within the company (as well as in the American society) and therefore these employees could have been concerned about their comments or opinions on such a topic being taken out of context. Also, some participants could have perceived taping as invalidating the confidentiality that was assured to them. Daniels and Cannice (2004) report a similar situation in their business research study where the interviewees became guarded about what they said when they were taped. For this and other reasons, the usefulness of a tape recorder during interviews remains somewhat debatable amongst researchers (Perry, 1998).

4.7. ETHICAL CONSIDERATIONS

This study adheres to the ethical standards prescribed in the Northumbria University's policy document. The ethical concerns of this study revolved around three main areas: informed consent, confidentiality and potential harm to participants. Informed consent to participate in this study was obtained as follows: first, the author contacted potential participants by phone or email to see if they would be interested in participating in the study; next, for those who consented to participate, an informed consent form (Appendix I) was provided prior to the interview for reading and signature. To ensure confidentiality and to protect anonymity, the interview participants were assigned pseudonyms (see Appendix A). Further, those case organisations that had unique names were given generic names to ensure confidentiality. In order to minimise potential harm to the interview participants from either the research process or the findings, the author took necessary steps such as the non-release of data analyses into the public domain which would cause damage or harm to the participants. Finally, all information collected as part of this study was treated in a confidential manner. Interview and observation data and corporate documents were stored securely in the author's own personal computer (hard copies were stored in a filing cabinet) at his residence. Furthermore, both the author's personal computer and the case study database were password protected to ensure security.

4.8. REFLEXIVITY

In qualitative research, reflexivity is viewed as necessary to facilitate understanding of both the phenomenon studied and the research process (Watt, 2007). Reflexivity implies 'that authors should explicitly position themselves in relation to their objects of study so that one may assess researchers' knowledge claims in terms of situated aspects of their social selves and reveal their (often hidden) doxic values and assumptions' (Maton, 2003, p.54).

4.8.1. Biographical Reflection

Autobiographical reflection is a common form of reflexivity in research and it entails providing a biography in order to let the audience know where the researcher is coming from (Maton, 2003). In keeping with this tradition, the author wishes to state that he has been an employee of PharmaCom for the past seven years, and works as a project

manager in the R&D Information Systems department. In his current position, the author has been responsible for managing the activities of his department's offshore development centre in India, and the actual and perceived performance of this centre has had a direct link to the author's job performance, thereby indicating his vested interest in the financial and other benefits (promotion, awards, recognition, etc.) associated with positive job performance. Furthermore, the offshore initiative at PharmaCom was pursued on a pilot basis and the consideration of its full-scale adoption depended on the success of this pilot and other factors. The successful implementation of this pilot initiative thus had a direct bearing on the future career growth of the author.

Although the author immigrated to the USA about 18 years ago and is now a United States citizen, he still maintains strong family and social ties with India, where he was born and raised. The author acknowledges that he may have a personal bias which is in favour of the offshore outsourcing business model that brings the much-needed economic growth opportunities to India. There is probably no doubt that the bias and personal history would likely affect how the audience of this study would perceive the author's findings. Nevertheless, the author believes the value that this study would provide in terms of rich understanding of the process of change related to offshore outsourcing would outweigh any concerns about subjectivity.

4.8.2. Reflections on the Research Process

According to Watt (2007), fieldwork requires a significant amount of personal commitment and therefore researchers should select topics that they believe are worthwhile investigating. Researchers need to be aware that their assumptions about the phenomenon chosen for investigation are likely to influence their research questions. Also, the motives of the researcher for conducting a particular study will have important consequences for the trustworthiness of a research project (Watt, 2007).

In terms of topic selection for this study, the author has been involved with offshore IT outsourcing efforts at PharmaCom since 2003 and wanted to investigate this topic further for several reasons. First, the author was convinced that offshore outsourcing is a macro-economic phenomenon which is likely to be present in the foreseeable future, and that it can help the U.S. economy become more competitive in the long run. Second, the author was aware that a majority of the organisations undertaking offshoring activities seem to

encounter some type of internal resistance, which often leads to project failures. Reflecting on his current experience working with an offshore development centre in India, which had faced several difficulties in terms of gaining employee acceptance, the author realised that by effectively managing the change related to offshore outsourcing, any negative impact due to offshoring on the organisation could be reduced. Further, the author's extensive literature search revealed the total absence of published literature that addressed change management relative to offshore outsourcing. Thus, the author felt that a study focusing on the nature and process of change related to offshore outsourcing would shed light on key issues involved in managing this change. A better understanding of this change process was thought of as essential to guide policy makers and practitioners to achieve successful outcomes, and to provide a basis for conducting further research on these issues.

Reflexivity in methodology was addressed here in several ways. First, a clear distinction was made between qualitative and quantitative approaches to social research and a discussion was provided on their strengths and weaknesses. Next, the various qualitative research methodologies that could be potentially employed to answer the research question were presented, and a case was made for using the case study methodology. Finally, the limitations of using the case study methodology as well as other methodological limitations were laid out. Reflexivity, in this sense, is about explicating the research methodology and the way in which it is utilised in this study so that the author can be made accountable for the analysis.

4.8.3. Reflections on Employee-Researcher Role

The role of a researcher as an employee within an organisation and its resultant implications are well documented in management research. The researcher's role 'may or may not be explicit and this will have implications for the extent to which he or she will be able to move around and gather information and perspectives from other people' (Easterby-Smith, *et al.*, 2002, p.110). In conducting this research, the author adopted an overt role of an employee-researcher at PharmaCom, and this arrangement still allowed room for performing the role and function of a researcher. The dual role approach not only allowed the author unfettered access to the case organisations for carrying out in-depth research over an extended period of time, but also provided the much needed access to company information and employees. By adopting a dual role, the author was able to

access a number of rich information sources and people, a privilege that is not usually available to a full-time researcher. Finally, this approach afforded the author an opportunity to be truly engaged in the case organisations and focus on the organisational change process that was being implemented.

4.8.4. Reflections on Experiential Knowledge

Experiential knowledge was a factor that had an important influence on the research. Heron (1989, p.13) defines experiential knowledge as 'knowledge gained through action and practice...It is manifest through the process of being there, face-to-face, with the person, at the event, in the experience'. For this study, experiential knowledge was vital to understanding the complexities of change related to the offshore IT outsourcing process. The author's knowledge of the company history, business operations and issues facing the pharmaceutical industry was necessary to understand why the company was embracing changes, including adopting offshore outsourcing. In addition, knowledge regarding the organisational structure and functioning of the overall IT organisation was needed to select cases for in-depth study and to make sense of the IT departments' efforts to promote change by integrating offshore outsourcing as part of their sourcing strategy. The author had to also be sensitive to issues such as job dislocation and wage pressures, which were of implicit concern to many software programmers and other IT workers in the company. Finally, without long periods of residence as an employee-researcher at PharmaCom, the author would have lacked the experiential and tacit knowledge necessary to carry out this research.

4.9. SUMMARY

This chapter presented the philosophical assumptions that guided this research and discussed the research strategy and method employed by this study. Next, it defined the scope and limitations of the research design, and identified the strategies used in this study for establishing validity and reliability. Finally, ethical issues related to the study and the strategies for dealing with them were discussed.

5. CASE STUDIES

5.1. INTRODUCTION

Analysing data is one of the least developed and most challenging aspects of doing case study research (Yin, 2003b). Yin offers three general strategies for the analysis of case study evidence: i) relying on theoretical propositions; ii) setting up a framework based on rival explanations; and iii) developing case descriptions. The first analytical strategy is concerned with using the theoretical propositions of the research to guide the case study (i.e. within-case) analysis. There are two advantages to using this strategy in this study. First, it will help to sift through vast amounts of case study data and will assist in meaningful data reduction by focusing attention on certain data while ignoring other data. Second, it will help to organise the case study data using the theoretical propositions as its basis. The study's theoretical framework (i.e. generic process model of change) will enable both data organisation as well as analysis of the characteristics (and relationships) of the following components involved in the change process: i) context; ii) diagnosing and planning; iii) implementation; and iv) institutionalisation. Thus, the case studies included in this chapter are structured to take advantage of this analytical strategy. Following this approach will also greatly facilitate the comparison of the three case organisations along the same dimensions using the cross-case synthesis technique suggested by Yin (2003b), enabling the identification of patterns within the data.

Background on the company and its business activities is provided in the next section so that the case studies can be understood in reference to the broader context of the company's business climate.

5.2. COMPANY OVERVIEW

PharmaCom is a multinational life sciences company with operations in nearly 100 countries around the world. In 2004, the company employed about 96,000 people in its business comprising of prescription drugs and human vaccines. The company's origins can be traced back over a hundred years to the manufacture of synthetic dyes based on coal products. Insights into the chemistry of dyes gave the company's researchers the knowledge to pursue innovations in multiple fields relating to the development of

products designed to improve the quality of life of people ranging from pharmaceuticals, agricultural chemicals, paints, fibres, and plastics. Due to increased competition and the pharmaceutical industry-wide consolidation during the 1990s, PharmaCom's executive leadership made a strategic decision in 2002 to focus on the pharmaceutical side of the business, thereby increasing the resources for the discovery and marketing of prescription drugs, and refocused the company's R&D efforts on delivering pharmaceutical products in the following therapeutic areas: i) respiratory and allergy; ii) cardiovascular and thrombosis; iii) oncology; iv) diabetes; v) arthritis and osteoporosis; vi) anti-infectives; and vii) central nervous system.

Even though PharmaCom was considered a top-tier pharmaceutical company based on its research and development (R&D) capabilities, sales volume, organisation and global outreach, its profitability and market capitalisation were not at optimal levels at the beginning of this decade. The need to bring profitability and market capitalisation up to levels sufficient to maintain global industry leadership drove the strategic decision to focus on generating organic growth.

5.2.1. Business Strategy

PharmaCom's vision is to create and sustain value by being recognised as a pharmaceutical industry leader, one that is valued by patients and healthcare providers, sought after as an employer, and respected by the scientific community and by its competitors. The company's stated mission is the development of lifesaving drugs for therapeutic disease management. Its top brands rank among leading treatments for targeted disease groups: seasonal allergies, diabetes, thrombosis, lung and breast cancer, hypertension, and human vaccines. Scientific discovery and knowledge generation aimed at these targeted diseases is the crux of the company's R&D business to develop new drugs. In short, the company's goal is to deliver effective and cost-efficient healthcare solutions at a time of dramatic advances in technology and challenging economics.

The core strategy of PharmaCom is to create value by rapidly developing, launching and successfully marketing innovative pharmaceuticals that satisfy unmet medical needs in large patient populations. Its strategic imperative is product leadership: inventing, developing, supplying, and successfully commercialising products that are perceived by their users as making a real difference to them.

5.2.2. Business Performance

The 2002 decision to focus on organic growth resulted in PharmaCom achieving one of the fastest sales growth rates in the industry and a major improvement in profitability (see Table 4 for earnings data from 2001 to 2005). Through the success of its principal products, PharmaCom has been able to steadily increase its market presence globally in recent years (see Table 4 for sales data from 2001 to 2005). The company also produces a number of local and regional drugs that provide additional sources of revenue. Although many of these drugs have been experiencing increasing competitive pressures, the revenue streams and future forecasts indicate signs of sustained growth.

Table 4. Financial summary, 2001-2005

Indicator	2001	2002	2003	2004 (1)	2005 (2)
Net Sales ($ Million)	20,417	25,777	22,269	31,499	34,139
Gross Margin (as % of sales)	73.3	68.1	69.8	76.9	78.1
Operating Income ($ Million)	3,238	3,537	4,587	10,789	11,399
Net Income ($ Million)	1,339	2,614	2,376	6,281	7,919
Earnings Per Share ($)	1.70	3.30	3.02	4.71	5.92

Notes:

(1) Based on full-year adjusted pro forma income statement (unaudited)

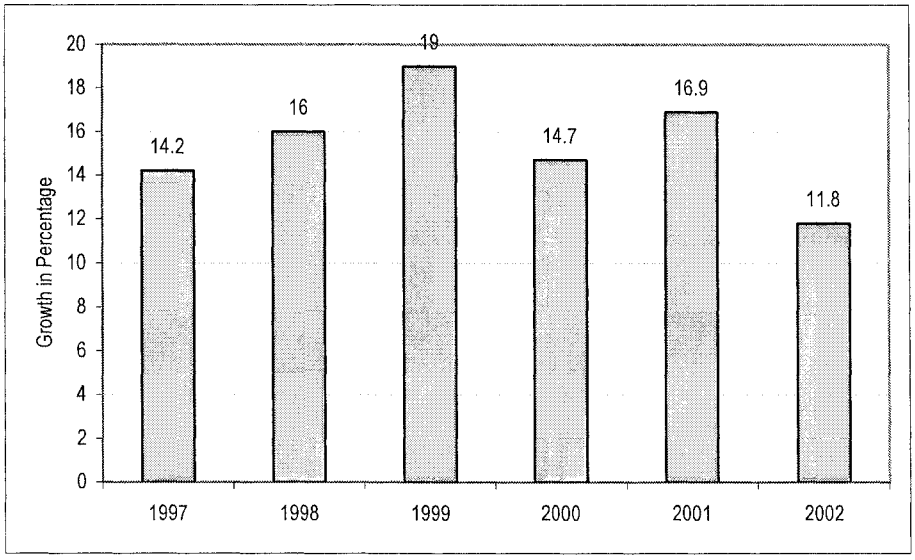
(2) Based on full-year adjusted consolidated income statement (unaudited)

Source: Author, based on data from company reports

In 2003, the industry was faced with several challenges such as a drop in the growth of prescription drug spending (Figure 2), pricing pressures from governments and health insurers, escalating costs of drug development (Figure 3), reduced returns on products due to parallel trade, and competition from generic drug makers, all of which began to squeeze margins. During the same year, PharmaCom anticipated that these market forces would impact its business performance and decided to proactively take steps to manage their effects. Consequently, PharmaCom's performance in 2003 was marked by mixed financial results. The divestiture of non-core businesses in 2002, decreased sales in core business, the continued market decline of non-principal products, and a negative impact

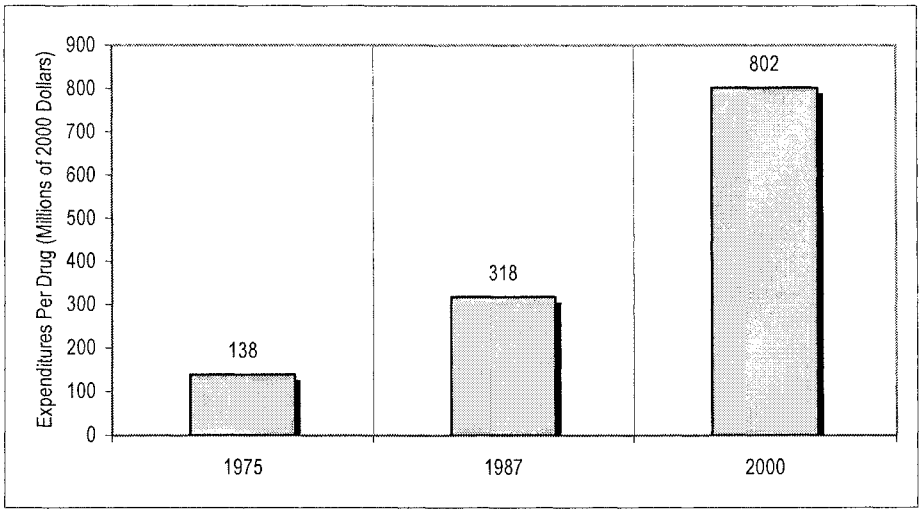
of currency translation on sales, all contributed to this weak performance. Nevertheless, PharmaCom forecasted that both mid- and long-term growth trends for the company, as well as the industry, would be positive. As expected, the period from 2004 to 2005 has been one of substantial growth for the company (see Table 4 for a summary of financial performance).

Figure 2. Annual growth in prescription drug spending, 1997-2002



Source: IMS Health (2002)

Figure 3. Growth in drug development costs, 1975-2000

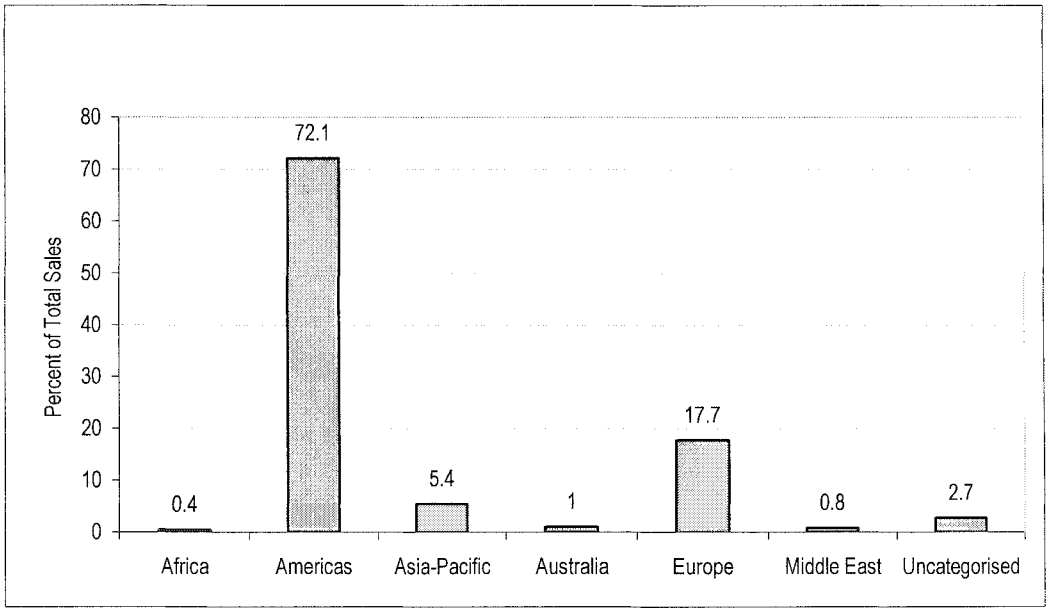


Adapted from: DiMasi, Hanson and Grabowski (2003)

5.2.2.1. Net Sales

PharmaCom generates revenues from products that have been developed and launched successfully in various regions of the world (see Figure 4 for industry total sales by region in 2003). For example, in 2003, the principal products accounted for approximately 64.6 percent of total core business sales, while dermatology business sales were 2.2 percent, sales activity of bulk and contract manufacturing (by third party) was 3.4 percent and other products that do not receive marketing and promotional support amounted to 29.9 percent of total core business sales. By 2004, the principal products accounted for 60.5 percent of the total sales while the non-principal products represented 39.5 percent of the product portfolio.

Figure 4. Pharmaceutical industry total sales by geographical regions, 2003



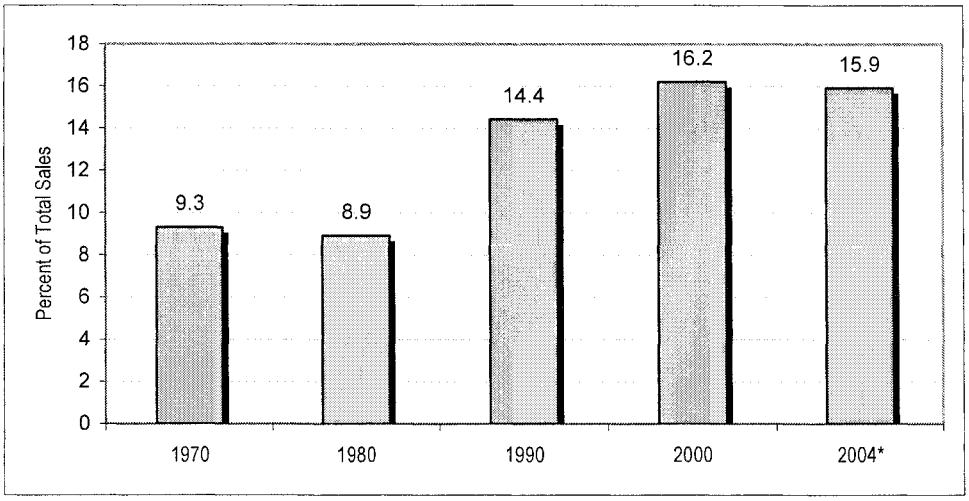
Source: The Pharmaceutical Research and Manufacturers of America (2005)

5.2.2.2. Cost Structure

There are many costs associated with developing, producing, and selling PharmaCom's products. The R&D budget in 2005 was approximately $5.24 billion, increasing from $3.93 billion in R&D investments in 2002. Pharmaceutical companies are spending an average of 17 percent of sales (Figure 5) or $3 billion per year on R&D activities.

DiMasi, Hansen and Grabowski (2003, p.19) note that 'up to 75 percent of these enormous costs are due to failure of drugs in development' (see Figure 6).

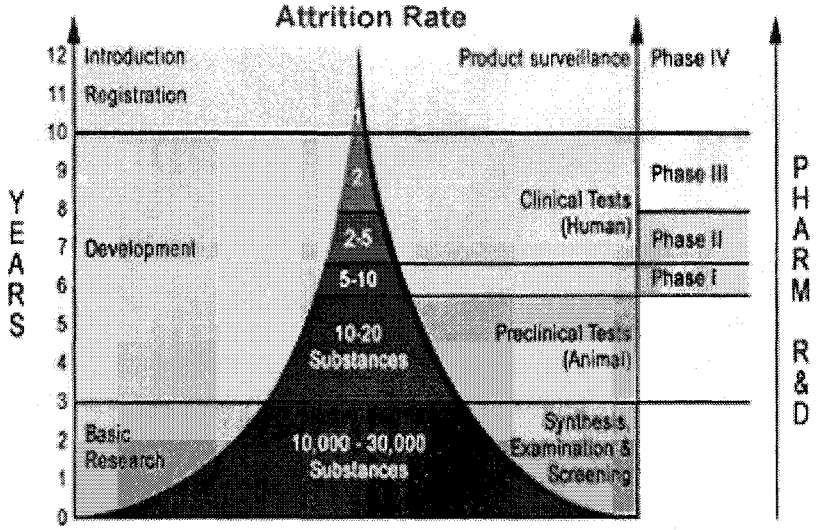
Figure 5. Pharmaceutical industry R&D expenditures as a percentage of total sales, 1970-2004



*Estimated

Source: The Pharmaceutical Research and Manufacturers of America (2005)

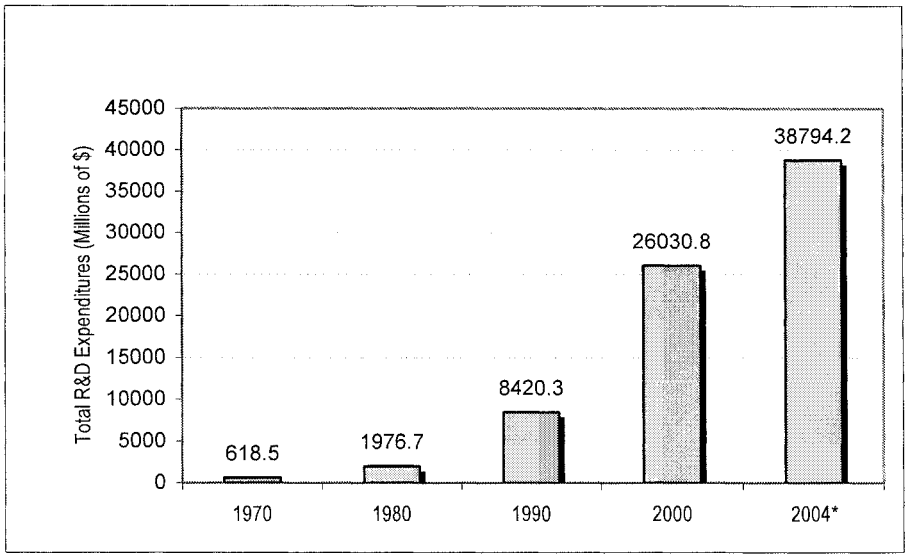
Figure 6. Attrition rate in drug development



Adapted from: PharmaCom (2003c)

PharmaCom's R&D investment is comparable to similar-sized competitors in the industry (see Figure 7 for growth in industry-wide R&D spending). In order to improve on its competitive position and increase company value, PharmaCom seeks to maximise the return on its R&D investments and to find ways to reduce its overall cost structure.

Figure 7. Pharmaceutical industry global R&D spending, 1970-2004



*Estimated

Source: The Pharmaceutical Research and Manufacturers of America (2005)

PharmaCom incurs its production costs in manufacturing operations. In an effort to lower costs, PharmaCom has distributed the manufacturing of products to geographical regions where there is a cost advantage. Shortening the technology transfer time between R&D and manufacturing is another strategy by which the company seeks to reduce costs. Selling and marketing costs are incurred in the Sales & Marketing division. Reducing costs in this area hinges on the company's ability to promote its products more effectively and efficiently to its customers.

5.2.2.3. Earnings

PharmaCom sells products that can be considered either as principal products or as other products and these products can be categorised within a particular therapeutic area. In 2001, for example, PharmaCom's earnings were not as high as the market's expectations, though PharmaCom had an attractive product portfolio and product pipeline. However, as

more innovative products are launched, the resultant strong earnings growth was projected to positively impact PharmaCom's market capitalisation. By 2003, although the company's portfolio was relatively attractive, there were certain operational gaps and challenges that had to be addressed. For example, a need was identified to increase the speed of compound production in order to reduce the time required to reach peak sales. The company hoped to achieve this by improving the technology transfer process between the R&D and manufacturing divisions.

5.2.3. Key Business Processes

PharmaCom is divided into four operational areas: i) R&D; ii) Manufacturing; iii) Sales & Marketing; and iv) Finance & Administration. The effective and efficient management of the product pipeline, while launching new products into the marketplace, is critical to the success of PharmaCom. As products advance through the R&D value chain, the different operating areas gain access to specific product information, including preliminary findings on the product's safety, efficacy, and stability. Safety is a measurement of the amount of impurities in the product as well as the number and types of side effects that the product and any decomposition derivates may cause in a patient. The operating areas also receive information regarding the efficacy of the product in treating the targeted disease. Stability, a measurement of the ability of the product to maintain its chemical and physical integrity, is also important as each regulatory authority has specific requirements for shelf life and product appearance. Based on the information available in the product reports, the management team determines the necessary investment and marketability of each new product.

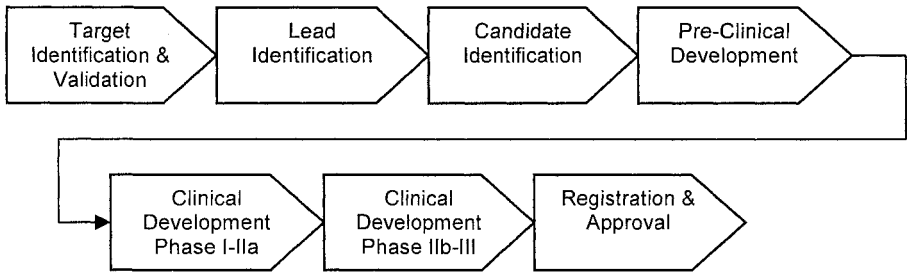
5.2.3.1. Research and Development

The R&D division is responsible for new product development, product quality testing, and submission of product specifications (safety, efficacy, stability, and appropriate usage) to the appropriate regulatory authorities. With the ambitious goal to launch one to two significant drugs to market each year, PharmaCom hopes to increase the rate of new product innovation while boosting productivity without dramatically increasing costs.

As of 2003, the R&D division had 5,500 employees in four major sites around the world. The company's R&D organisation exemplifies the company design for the organisation

of one of its most strategically important functions (see Appendix J for the R&D division's strategy). According to company sources, the R&D organisation has moved well beyond the traditional boundaries and has adopted a 'network-centric approach'. It has replaced silos of research and development that used to operate sequentially with a network of sites, centres of expertise and global functions organised around a value chain (Figure 8) that performs time-critical activities in parallel. To enhance productivity and reduce cycle time, the division undertakes accelerated pre-clinical and clinical activities which seek an early 'proof of concept' to enable it to make reliable decisions on pursuing a drug project and focusing its pipeline resources. While the different project teams serve as the core units of innovation, the centres of expertise provide the best technical and scientific support to the projects, and the global functions support both site-based teams as well as global project teams in product development efforts.

Figure 8. R&D value chain



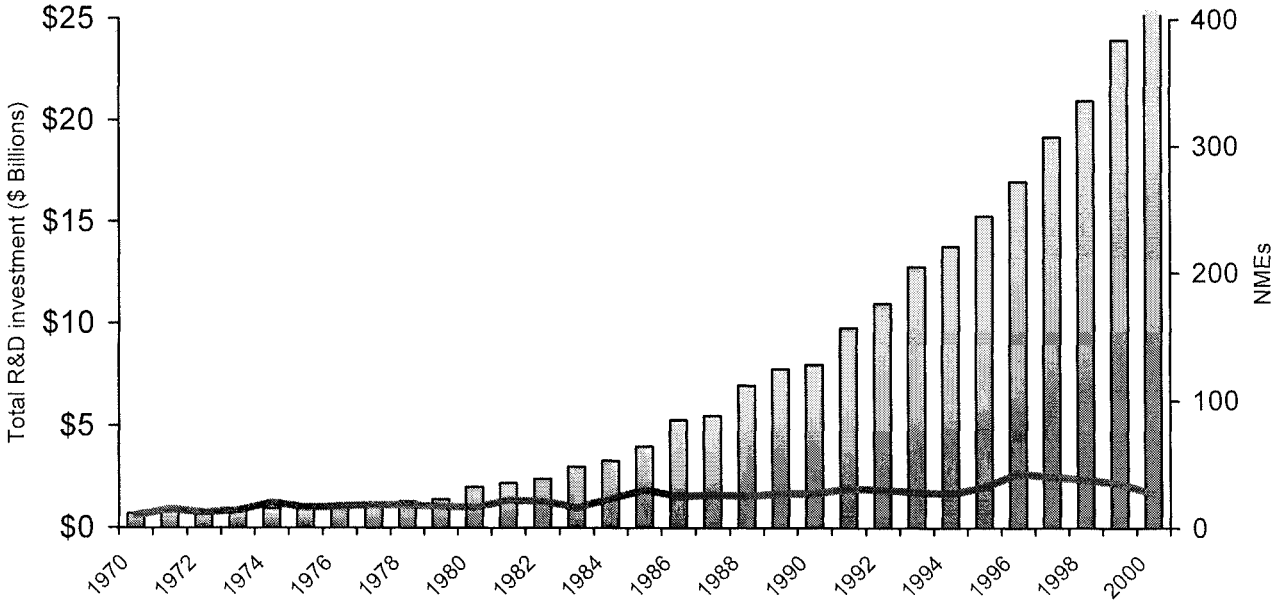
Source: Author, based on company reports

Managerial decisions affecting PharmaCom's R&D pipeline focus on increasing new product discovery speed as a top priority, but must balance many other factors. Based on the overall company strategy and the projected product development costs and marketability of each drug candidate in the R&D pipeline, the executive management team decides on the level of resources to be allocated to its development. These decisions affect the utilisation rate of the scientists. The executive management team also has the ability to cancel development of a drug candidate at any phase in its development and this option is considered when the costs associated with its development outweigh the benefits, in which case the allocated resources are redirected to the development of other drug candidates.

The strategies and plans of the division have recently been impacted by the critical industry-wide concern about R&D productivity (Figure 9). Some of the issues that the

division has been addressing, in order to remain competitive, include accelerating the progression of priority projects, successfully implementing compound-enabling technologies, and implementing an improved compound back-up strategy.

Figure 9. Pharmaceutical industry productivity *vs.* R&D investment



Source: The Pharmaceutical Research and Manufacturers of America (2000)

5.2.3.2. Manufacturing

The manufacturing division is responsible for the manufacture of PharmaCom's drug products. It has three principal functions: i) work closely with R&D to optimise the production of compounds for clinical trials; ii) develop and convert new innovative compounds and formulations from R&D into commercial products; and iii) ensure that all pharmaceutical products are available to meet market demands. Each plant at PharmaCom manufactures products in two distinct phases. In Phase 1, the active ingredient is produced, and in Phase 2, bulk products are formulated and packaged.

PharmaCom has a number of plants located in different geographical regions of the world. Each region has distinct logistical challenges and cost structures reflecting the

local conditions. In 2003, each plant produced one principal product and some regions have specialised in developing technical expertise in specific therapeutic areas.

As new products are developed, the executive management team forecasts the number of product units that are to be manufactured. This is a critical decision as under-forecasting will yield missed sales opportunities, while over-forecasting will result in inventory surpluses yielding increased carrying costs. These forecasts also impact plant production capacity planning and labour resourcing.

The executive management team also determines the distribution of products to be manufactured in each geographical region. Engineering studies are conducted to determine the ideal manufacturing sites and associated resource requirements. Management also incorporates plant utilisation factors and Good Manufacturing Processes (GMP) and Environmental Health and Safety (EHS) ratings for each region in this decision making process. A region that has a lower rating usually contains plant sites that are not approved by all relevant regulatory authorities. Such sites cannot produce products for sale in the regions within the jurisdiction of the corresponding regulatory authority. Engineering studies also highlight changes that can lead to improved GMP levels; however, implementing these changes may adversely affect cycle time and manufacturing costs. Although the cost of such studies could be quite high, choosing to not conduct one could have an adverse effect on time-to-market (TTM) and the probability of success.

Another key managerial decision involves the packaging format of new products as they are produced and released to the market place. Each product may be offered in bottles, blisters, or both. Packaging format choices affect both plant capacity and associated manufacturing costs.

The management of the supply chain and the manufacturing process is also a major challenge. There are high costs associated with conducting engineering studies and acquiring additional plants. Therefore, optimal asset utilisation is of vital concern to the financial well being of the company. In order to optimise the supply chain process, the management team may initiate certain programmes to streamline the division's internal processes in order to improve the speed and efficiency of the manufacturing processes. Such programmes facilitate cost savings in the future.

5.2.3.3. Sales & Marketing

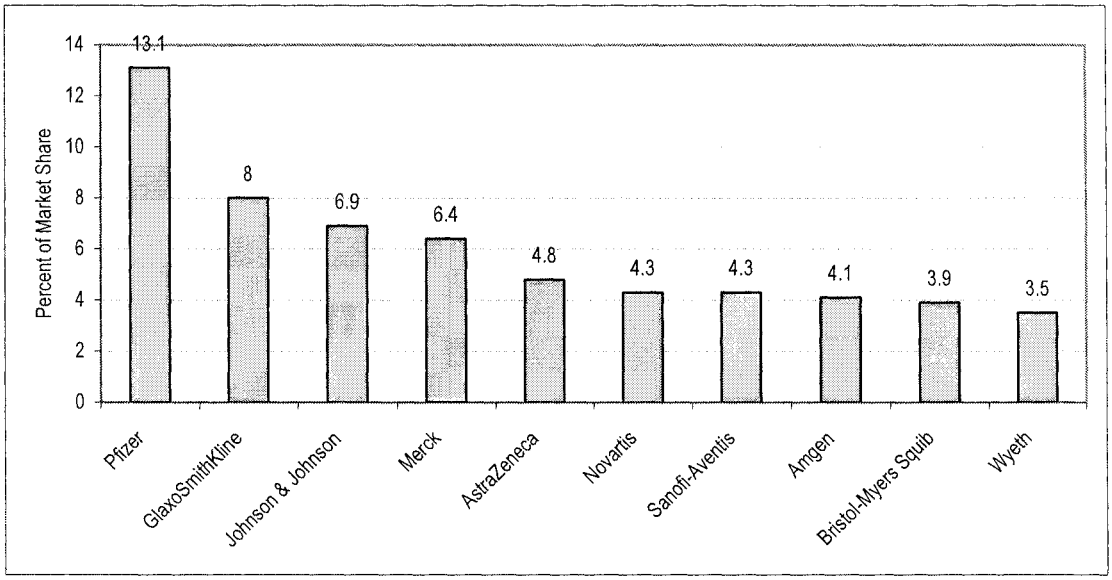
The Sales & Marketing division is responsible for the marketing and selling of the company's products. PharmaCom has an established marketing and distribution channel system that allows accelerated launches of new drugs. The company uses its sales force, PharmaCom's most important marketing and selling channel, to communicate its products more effectively. The sales force includes sales representatives, area and regional managers, and experienced clinicians serving as medical field representatives.

When a product is 'realised' in the R&D value chain, this division develops a pre-launch strategy outlining promotional and educational activities and the targeted customer groups. The pre-launch strategy plays a crucial role in reaching peak sales as quickly as possible.

PharmaCom attempts to maximise the launches of its new products by concentrating sales force efforts in large growth markets, increasing return of marketing investments, and increasing global brand awareness. To the degree that the sales force can successfully link the PharmaCom brand name with its innovative new products, the company will see improvements in its market position (see Figure 10 for the U.S. market share of top 10 pharmaceutical companies).

The company's global market is divided into three geographical regions, namely West, South and North, which offer customers with different expectations and characteristics. The company utilises the available market information concerning these regions to plan its marketing strategy.

Figure 10. U.S. market share of top 10 pharmaceutical companies, 2004 sales



Source: IMS Health (2004)

The western region presents customer groups that are unique and require careful management. The largest customer groups in this market are private health care providers, wholesale pharmacists, insurance companies, managed care, and patient organisations. Until recently, 'free pricing' was the norm in this region allowing the company and its competitors to set their own prices for both new and existing drugs. This, combined with the overall wealth of the population, led to some of the highest prices in the world. In the last few years, the landscape of this region has been changing, however. In an attempt to control the escalating costs of healthcare, major players in this marketplace have been seeking to negotiate 'bulk' discounts, to increase the use of generic products (where applicable), and to restrict which drugs will be reimbursed for patients. Healthcare reform has been proposed in the past but has yet to be ratified. Healthcare reform in this region could lead to dramatic price reductions requiring a complete reformulation of sales strategies.

Strategic allocation of a direct sales force, promotional dollars, and price trends have all factored into the company's overall value proposition in the western region. Investments in strategic initiatives have helped to stimulate sales by improving the productivity of the sales force and top brands. Information technology has played an increasingly important role in product manufacturing, sales, and distribution. Management of new supply chains

and customer relationships through the Internet and e-commerce are emerging as important strategies in this region.

The southern region consists of primarily small to medium sized countries. Although there are many political and economic differences between the countries that make up the southern region, there has been a trend towards common drug regulation and approval policies. Though prices still differ from one market to another, increased consistency throughout the region is becoming more evident. Furthermore, most of the major countries have formed a common market and consequently exchange rates and growth rates in this region are converging.

Marketing strategy in the southern region focuses on the prescribers and medical representatives. Most sales are conducted in face-to-face meetings with medical practitioners. Marketing regulations are very strict and limit the mechanisms by which pharmaceutical companies can communicate directly with the patient. The digital revolution is exerting tremendous pressure on the 'standard way' of doing business in this region. The emergence of the Internet as both a researching and marketing tool is beginning to force change on regulatory policies in this region.

The northern region is a very fragmented region consisting of one very large market and a number of smaller markets. This region has experienced slow economic growth in the recent past. It often takes advantage of clinical trial results conducted in other regions, although local trials may be organised to assure the efficacy and safety on a local group of patients. Similar to the southern region, pricing in the northern region is regulated heavily by local governments, and there is increasing pressure in this region to reduce the cost of medical care.

5.2.3.4. Finance & Administration

The various support functions of the company such as human resources, finance, and information systems are combined into the Finance & Administration division. This division supports the other three operating divisions with respect to these functions.

5.2.3.4.1. Human Resources

The role of human resources function is to maintain a pool of talented and qualified scientists through recruitment, career development, performance assessment, and dismissal. The company's scientists are utilised at 105 percent, and the optimal utilisation rate for scientists is 110 percent, meaning that they work 4-5 hours overtime a week. These scientists help drive the R&D process and are a valuable resource to the company. The competition for qualified scientists is generally intense and the company offers a competitive compensation package and makes necessary investments to attract additional resources. In addition, this function manages the resources of the company's manufacturing plants, and recruits, dismisses or maintains the plant personnel working in all three geographical regions.

5.2.3.4.2. Finance

This function is responsible for the preparation of the company's financial statements in compliance with the quality standards and financial regulations in the countries in which the company's shares are listed for trading. It coordinates the purchase and implementation of all insurance and risk coverage instruments and manages the company's tax obligations worldwide. This function is also responsible for the development and management of relationships with investors, for developing and implementing management reporting policies and procedures, and for monitoring divested activities. Finally, it manages loan repayment and the issuance of new loans to finance growth. The function generates cash internally through profitable sales in conjunction with asset management.

5.2.3.4.3. Information Technology

PharmaCom's IT organisation employs over 2,500 people worldwide and has a financial annual outlay in excess of $1 billion. It is headed by a Chief Information Officer (CIO) who reports to the Chief Operating Officer (COO) of the company.

In 2002, the IT organisation was reorganised in order to improve its alignment with the company's business strategies and to enhance its business value through the effective use of business knowledge, best practices, and standard processes. The principles that guided this reorganisation included:

1) Alignment with the company's business organisation and strategies;
2) The strong need to leverage information technology through standardisation; and
3) Enhancing service to internal business customers.

The result is a highly decentralised organisation structured as four independent Information Systems Departments (ISD) and a Corporate Information Systems (CIS) group with three specialist subgroups under it. The ISDs service the four main Business Functions of the company, namely R&D, Sales & Marketing, Manufacturing, and Finance & Administration. They are responsible for developing, deploying, and supporting information systems, both locally (country level) and at the enterprise level (internationally), for their corresponding Business Function. CIS provides enterprise-wide services to the ISDs in the following areas: i) common IT services for systems (including setting technology standards); ii) IT infrastructure services; and iii) strategic planning and management of cross-functional initiatives.

5.3. BUSINESS CASE FOR OFFSHORE OUTSOURCING

PharmaCom undertook a detailed review of its strategy in 2003 and concluded that its current structures and processes, built up over many years, were too complex and no longer conducive to sustaining strong business performance. It was also concluded that PharamCom needed to respond to the changes in the business environment being observed in many of its markets, in particular increased governmental restrictions imposed on healthcare spending and impending patent challenges to two of the company's top-selling drugs.

In response to these challenges, PharmaCom's top executives decided to focus on: i) the company's top brands which represented more than 66 percent of total annual sales; ii) diligently executing the drug submission timetable to get new drugs to the market; and iii) building a product pipeline that would ensure the company's mid- to long-term growth. At that time, the company had a number of pharmaceutical compounds that were progressing well through the initial stages of product development and were expected to enter late stage within a year. However, moving these drug candidates successfully through the development cycle and bringing them to the market was anticipated to require increased investment. In order to free the resources necessary to make these investments, the management initiated a set of company-wide reshaping initiatives aimed at improving the quality of its processes and business, focusing on value-adding activities, eliminating inefficiencies, and freeing resources so that the company could invest more in future growth. These initiatives were intended, in the long term, to improve resource allocation and to increase the quality of PharmaCom's business by creating the level of excellence needed to implement its business strategies while continuing to generate sustainable growth in a more challenging environment. The management also envisioned the initiatives as a way of better managing the product portfolio with the objectives of: i) increasing business development opportunities through in-licensing and acquisitions of products; and ii) divestment of non-principal products. The management projected that, in just less than three years, $625 million a year could be reallocated on a permanent basis as a result of these initiatives. The projected financial savings were seen as validation that the new initiatives ensured the company's future in terms of new products while protecting its earnings growth.

From the outset, the executive management sought to dispel any misperceptions about these change initiatives among employees. The stated that the reshaping initiatives were not meant as 'a one-time cost-cutting exercise, it will become the way we do business'. To the management, a pure cost-cutting exercise would not produce the sustainable results they were trying to achieve. Their goal was to continually reinvent the way the company did business, improve the quality of the business, and free up the resources needed to accelerate the development of the product pipeline and attain product leadership.

To champion the reshaping initiatives, a member of the executive management team sponsored each individual initiative. Project leaders and project managers were appointed

and were responsible for the planning and implementation of each initiative. A Programme Coordination Office, with executive management representation and leadership, was tasked with guiding the project leaders to ensure overall programme coherence and consistency and coordination of project execution.

The executive management took a Business Function-based approach to implementing the reshaping initiatives. A range of individual initiatives were proposed in several geographical regions and in the Sales & Marketing, Research & Development, Manufacturing, and Finance & Administration Business Functions. As an example, in Finance & Administration, the management initiated several projects to improve quality and overall productivity and efficiency, including one focused on evaluating an offshore outsourcing strategy for IT projects and services. Sales & Marketing had already experienced success with offshore outsourcing on IT projects (on a smaller scale) suggesting that this approach was worth exploration on a larger scale.

The management proceeded with caution, redirecting only a portion of the total external IT spending to offshore companies. The rationale was that the company could first test the long-term feasibility of the offshore outsourcing strategy while being sensitive to and mitigating initial fears and concerns of employees by demonstrating management's ability to manage offshore outsourcing without negatively impacting internal staff. The offshore outsourcing initiative was led by a change management team (CMT) comprising of senior staff members from the different ISDs and CIS. The CMT was charged with planning and implementing the offshore initiative within the different information systems departments, taking into account its potential impact on the company's business and on the departments' human resources. With the CMT in place, the executive leadership had created the organisational structure and conditions necessary for the adoption of the offshore service delivery model in the company.

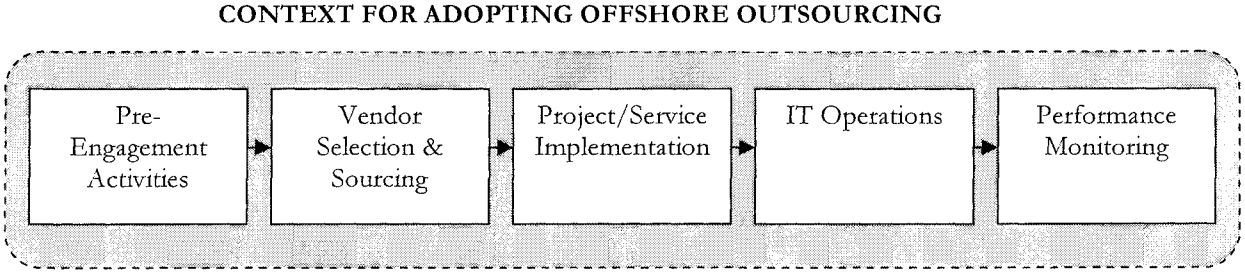
During the latter part of 2003, the CMT organised workshops to examine lessons learned from the previous offshore outsourcing experience. The CMT members also received a full day of education from both internal experts and external agencies (such as Gartner and Infosys) in order to help them overcome their initial fear of offshore outsourcing. More specifically, the workshops examined offshore trends in application software outsourcing, potential benefits and drawbacks of the different offshore delivery models (i.e. onsite, onshore, nearshore and offshore), myths and realities regarding cost savings, factors to consider in supplier selection, and critical success factors. These workshops

also reviewed several case studies from various industry sectors in application software outsourcing, focusing on business challenges that were driving outsourcing decisions, the scope of services covered by application outsourcing engagements, key factors and attributes involved in vendor selection, and criteria for measuring success.

As part of data gathering and analysis, the CMT initially examined 16 vendors and selected six for more intensive screening (see Appendix K for vendor selection criteria). This process included field visits to vendor facilities in India to meet their staff and to understand their processes and capabilities. The assessment focused specifically on the capacity of the vendors to adapt or tailor their work processes to conform to PharmaCom's needs. The CMT finally selected three vendors, from which the ISDs and CIS could outsource their projects or services to. A two-year outsourcing agreement was negotiated and executed with each of these vendors, providing default contractual obligations between PharmaCom and the vendors. The outsourcing agreement required each work assignment to execute a Statement of Work (SOW) with an associated Service Level Agreement (SLA) and cost schedule. The ISDs and CIS were required to follow a Request for Proposal (RFP) process for each project or service execution to competitively select a vendor from among the approved vendors.

In early 2004, the CMT required each ISD and the CIS to offshore at least one project or service and provided them with guidelines and criteria for outsourcing. As a result, a total of 24 projects/services were identified from the different ISDs and CIS for offshore implementation during the first year of operation. The ISDs and CIS were responsible for designing and implementing the necessary governance structures and organisation to manage these projects/services within the context of the overall CMT offshore outsourcing process. According to corporate documents, the CMT intended to manage this process as outlined in Figure 11.

Figure 11. High level offshore outsourcing process



Source: Author, based on company reports

5.4. INTRODUCTION TO THE CASES

The preceding sections describe the company's strategy with respect to the offshore change initiative. They provide a frame of reference for understanding the challenges faced by the information systems departments (i.e. ISDs and CIS) as they planned their offshore initiatives. The outcomes of these efforts are reported below in the three case studies. The cases document the perceptions and the experiences of senior managers (i.e. CMT members), middle managers, and non-managerial employees in these departments, as obtained by personal interviews. For the R&D ISD alone, notes from the direct observation of a small number of participants were also used as a supplement in reporting the outcomes. Document analysis was used to report outcomes in all three cases as well as to verify interview and observation data. The reported change outcomes emerging from these data are organised into the following categories: organisational background, context, diagnosing and planning, implementation, and institutionalisation.

5.4.1. Case 1: R&D Information Systems Department

5.4.1.1. Organisational Background

The mission of the R&D ISD is to provide IT support for scientific research within the R&D division, enabling the discovery of new drug candidates and providing a framework for the management of clinical trials and the submission of new drug applications to regulatory agencies worldwide for marketing approval. The ISD has about 250 employees worldwide and is headed by a Vice President who reports functionally to the head of the R&D division.

The ISD was reorganised in 2002 in order to align it more directly with the R&D's business functions. Accordingly, the ISD redefined its strategic principles (i.e. values and priorities) as: i) creating the foundation to build a network-centric organisation for the division; ii) ensuring complete alignment of business and IT objectives; and iii) delivering consistent, stable, and robust IT solutions globally.

The ISD aimed to provide the employees of the highly-matrixed R&D division with the technical support necessary to enable networking across the boundaries of departments, divisions, and geographical sites. More specifically, it provided direct support to global

drug projects teams, which comprise the division's core units of innovation, in the form of appropriate tools to manage, integrate, and analyse data and to visualise and conceptualise experimental results. The goal was to optimise information management: from tracking and characterising potential drug targets and searching for chemical substances active against those targets, through to regulatory submissions. Optimal information management is a key success factor for increasing the division's productivity. It increases the efficiency of drug candidate selection and characterisation and the quality of the scientific findings. It also speeds the decision-making processes by providing more timely and accurate information upon which to base those decisions. Consequently, making all of the division's data from around the world available to the drug project teams, irrespective of the boundaries between teams, departments, and sites is a high priority of the ISD.

In this regard, the ISD employs a large variety of IT tools and solutions, ranging from a centralised chemical registration system for chemical substances and their structures, a biological activity database for recording the results of experiments measuring the biological effectiveness of various chemical substances, and the integration of chemical and biological data into a standardised platform (using portal technology). The portal provides an integrated view of toxicological, analytical, kinetic, clinical, and drug safety data and a window on associated research documentation stored in an enterprise document management system. In addition, the ISD develops *in silico* simulation techniques for computer-based design and selection of new molecules. *In silico* simulation significantly reduces the number of experiments that need to be conducted and provides information enabling more precise definition and control over the experiments that are conducted, as well as improving the interpretation of the results. Better drug candidates translate to more effective drug development. Hence, simulation tools yield a significant reduction in the overall cost of drug discovery and development.

The ISD also launched a number of IT-driven initiatives specifically designed to increase collaboration among the different groups across the R&D value chain, thereby more effectively leveraging individual expertise and organisational knowledge. These initiatives aimed to improve the collaboration between the different groups allowing for a greater number of experienced scientists to examine a given problem and thus increase the likelihood that the problem would be solved more quickly and creatively. Two knowledge-sharing technology platforms were introduced for this purpose: eRoom's

digital workplace (technology which allows users to share documents in a dedicated, virtual and secure workspace), and Tacit's Knowledge Mail (knowledge management software), a machine-learning tool that provides a facility for characterising the scientific expertises available within the company and for identifying potential experts that could be called on to advise in solving particular scientific and technical problems. Initiatives such as these, which are aimed at improving performance and enhancing social capital, represent the strategic focus within the R&D division to capture intellectual capital, facilitate communication among employees, foster cooperation with partners, and locate expertise within the company.

With the growing demand for new application systems from the R&D Business Function exceeding the internal staff capacity, in 2003, the ISD committed itself to increasing its productivity while decreasing the overall costs of its operations. The ISD's senior management viewed offshore outsourcing as a means for achieving this goal.

As prescribed by the CMT offshore outsourcing process, the ISD followed an RFP process to select a vendor for establishing an Offshore Development Centre (ODC) in India. The ODC was organised to function as an extension of the ISD, supplementing expertise in four critical software technologies: Documentum, Plumtree Portal, Tibco, and Informatica. During that time, the ISD was experiencing an internal shortage of technical skills in these technologies as well as a need for the rapid development of new application systems based on them. The ODC provided the equivalent of nearly 14 full-time personnel focused on software development and maintenance services in these technologies. It represented a total annual savings of $500,000 for the ISD.

Following exchanges between the ISD and vendor staff, a Program Management Office (PMO) was set up (see Appendix L) to handle the operational aspects of the partnership and to act as a single-point interface between the ISD and vendor, to resolve issues and channel any requirements regarding ODC activities. The PMO was responsible for eliminating communication gaps and maintaining consistency in reporting to the ISD management. Toward the end of 2004, the ODC was engaged in the implementation of four projects for the ISD.

5.4.1.2. Context

The R&D division's contextual conditions, which comprise the division's internal and external environment such as economic, legal/political, technology, leadership and resources, were found to be relevant in influencing the adoption and use of the offshore service delivery model within this ISD.

5.4.1.2.1. External Forces

The economic pressures foster concerns for increased R&D productivity and control over the overall costs of activities in the division. Commenting on the situation in 2003, the division's head, stated:

> Over the last five to ten years, although we've doubled the spend on R&D, the number of new molecular entities (NMEs) being submitted and approved have remained relatively stable, and even decreased in the last two years (PharmaCom, 2003c).

These economic forces have influenced, as described earlier, the division's strategies and plans to remain competitive. A middle manager and several non-managerial employees in the ISD also noted these concerns about productivity and cost control. They explained:

> The opportunity [i.e. offshore outsourcing] consists of improving the productivity by increasing the size of the team with low cost resources. (RNDMM3)

> In a time where the economy is in a downturn and financials are under immense scrutiny, cost cutting and staying within shrinking budgets is the main reason [why] our company chose to consider IT offshore outsourcing. Cost cutting without any loss of productivity is really the goal. (RNDNM3)

In spite of the economic and financial challenges, the acceptance level of offshore outsourcing as a viable sourcing strategy was relatively low within the ISD. This low-level of interest arises from the contradiction between facing the economic reality on the

one hand and the pharmaceutical industry's general resistance to change on the other, as a senior manager noted:

> Pharmaceutical industry is behind other industries in offshore outsourcing. CIO [Chief Information Officer] wants to be able to say to the CFO [Chief Financial Officer] "we have considered all the risks and benefits associated with offshore outsourcing" and can now make a decision about it. It's part of today's economy so we can't ignore it! (RNDSM1)

The legal/political pressures result from a changed global regulatory climate that has become more complex, expensive and risk-laden for the pharmaceutical industry, contributing to lower success rates for drug candidates. Regulatory agencies such as the U.S. Food and Drug Administration (FDA) now demand significantly more information on patient sub-populations and on interaction with other drugs, which necessitates larger and more complex multi-site clinical trials (Berndt, 2001). Consequently, clinical trials as well as disclosure requirements related to them have become more expensive and of longer duration, increasing the time lag between R&D investment and cost recovery. Moreover, stricter regulatory compliance standards result in lower success rates for drug candidates. At the same time, for large multinational pharmaceutical companies such as PharmaCom, it is 'particularly important to incorporate internationally accepted safety and efficacy regulations into pharmaceutical registration requirements' because credibly enforced regulations facilitate the export of their products (Broscheid, 2002, p.23). With the recent industry-wide focus on meeting regulatory expectations, reducing risks related to regulatory compliance worldwide have served only to dampen the enthusiasm for outsourcing. In spite of these heightened concerns at the industry level about outsourcing, only one participant believed that regulatory requirements could potentially pose a problem in the full-scale adoption of the offshore outsourcing model within the ISD:

> Pharmaceutical industry is highly regulated. Control over remote locations becomes an issue. Non-compliance with regulations is a major risk. (RNDMM3)

To support economically sound drug discovery and development, pharmaceutical companies depend heavily on technological developments such as combinatorial chemistry, high-throughput screening and bio-informatics to improve research productivity and to make the drug development process more efficient (Cockburn, 2004). These technologies have not only brought about a change in the way that drugs are discovered, but the tremendous amounts of data generated (i.e. genome sequence,

expression, protein and clinical data) by them have necessitated a reliance on IT to facilitate the conversion of information to knowledge. Not surprisingly, IT-driven initiatives focus on rapid introduction of innovative technologies to connect the researchers and facilitate the drug discovery process in PharmaCom's R&D organisation. For example, the introduction of portal technology has increased collaboration between researchers and enabled the aggregation of research information generated across multiple research disciplines. In acknowledgement of the impact of IT on the organisation, the head of the R&D division stated (PharmaCom, 2003d):

> The continuous progress in implementing and using informatics and emerging technologies to enhance knowledge sharing and collaboration within [the R&D organisation] is essential to our strategy of delivering innovative compounds that will go on to be successful pharmaceutical products.

Even though IT is generally seen within the division as essential for achieving productivity gains, the overall pressure to reduce R&D expenditures results in continuing pressure on IT to reduce costs. IT has responded by devising a strategy for rationalising operational costs, including IT spending. Most large pharmaceutical companies such as PharmaCom have already replaced their legacy systems or are in the process of replacing them, thus leaving less room for cost reduction through increased efficiency (Frost and Sullivan, 2005). A non-managerial employee described the IT spending situation in the ISD as follows:

> The main focus and the driver behind offshore really has to do with...how much we are willing to spend today on technology and maintaining technical staff. The models really have shifted. There was a time when we had lots of money to spend on technology and, in particular, on consulting, but there is really a move against that...so for me that's the primary driver and I think there is also a feeling that we can help to augment the staff and the knowledge, and have expertise at a better price that can still focus on technologies that are of great interest to us, because if you look at what we are able to do with our internal staff, its pretty difficult to just keep the entire staff on the cutting edge of technology even with our technical team. (RNDNM1)

5.4.1.2.2. Internal Forces

Of the eight study participants in this ISD, only one non-managerial employee and a middle manager perceived the offshore initiative to be a response by the executive leadership in reaction to the problems presented by the company's external environment

(i.e. competition from generic drug makers, pricing pressures, etc.). At the same time, the non-managerial employees expected the very same leadership to also serve as a constraint on the change. They explained:

> For us, we had executive sponsorship for the offshore initiative and when the executives are changed, the power shifts and this puts the initiative at risk. As a result, there is a risk to the value of the investments (financial, human resources, technology, processes) not being realised. (RNDNM1)

> At the moment [the strategy and] organisational structure [for the offshore initiative] is being built and [it will be] communicated after the top level management makes the decisions. (RNDMM1)

A majority of the participants felt that the offshore initiative was a direct outcome of resource constraints, both financial and human, faced by the ISD. For example, a senior manager in the ISD commented:

> The opportunity consists of improving the productivity by increasing the size of the team with low cost resources. (RNDSM1)

Similarly, the middle managers noted these resource constraints in the following manner:

> Insufficient internal development resources [for software development and maintenance]. Budget challenges. (RNDMM2)

The non-managerial employees, who bore the brunt of the change, provided similar explanations as well, although they were concerned that the resource constraints would not be abated even with the offshore model in place. They explained that, during the offshore staffing phase, they found the offshore staff to be lagging behind in technical and communication skills as well as in business knowledge, and were unsure of how to engage them productively in ongoing or new projects:

> The No.1 business driver is cost cut. However, many companies do not pay attention to cost effectiveness and long-term partnership[s] so eventually the cost-cut[ting] goal or objective cannot be achieved. This problem is a major reason why offshore initiatives fail. Some companies want to use offshore as a way to compensate [for] a skill gap in internal resources, this would be a big mistake since offshore is addressing a labour shortage, but not skill or knowledge shortage. Offshore success actually requires more knowledgeable and skilful internal resources. (RNDNM2)

These concerns resurfaced during a direct observation session when a non-managerial employee, who is a Project Manager, stated:

> The Project Manager and Technical Leader have outlined [system] development activities already foreseen for the remainder of 2005 to be 465 mandays. Based on the workload, we determined [that] we need three [offshore] developers plus [an internal developer]. It appears there is now $0 allocated for the R&D Portals area to complete this work this year. (RNDNM1)

5.4.1.3. Diagnosis and Planning

5.4.1.3.1. Diagnosis of the Need for Change

With reference to diagnosing the need for change and planning the implementation, the middle managers felt that the need for a sense of urgency to maintain the momentum of change was lacking in the ISD. One middle manager commented:

> [The organisation needs] clear expectation around the sense of urgency. (RNDMM1)

Their efforts to alert and motivate the organisation were also evident from their interaction with the team members. For example, during the direct observation of a team meeting, the same middle manager asserted:

> Also a concern to raise with [the vendor's management and] the [vendor's] Team Lead…is that the Documentum application coding is "proceeding slowly, but steadily"...that the "sense of urgency" needs to be addressed with the developers. Please communicate this message to [the vendor] and let us know from their perspective if this is unclear or if there are issues. The expectation from our side is that the development customisations turnaround time should be faster. (RNDMM1)

The non-managerial employees felt that the change was being pushed from the top and that there was a lack of a vision for the change (i.e. specifically for the offshore initiative), specifying the future state of the organisation:

> [Top management should] help to clarify the reasons for doing it [i.e. offshore outsourcing] and also the reasons [why] we need to make adjustments and to remind people that it is more productive for us when we make those adjustments. (RNDNM1)

The senior manager of the ISD also stated the need for a vision:

> Make sure you communicate why the change is occurring and why you are doing it....Change brings opportunities. [Examine the] new environment and see how to benefit [from it]. IT was really [European] oriented and then the U.S. approach came in. They [U.S. Management Team] brought good communication skills that we [Europeans] learned from. Be positive and move forward. [This] has brought efficiency and permitted [us] to be successful in implementing the business. (RNDSM1)

Both the non-managerial employees as well as the middle managers expressed dissatisfaction over the process of data gathering and analysis for diagnosing the need for change. For example, one non-managerial employee observed:

> It's not very clear how we estimate and audit real gain from the offshore [delivery model]. I think establishing a cost model will give us a more clear guidance for what kind of projects should be internally developed versus those that should be outsourced through on-site outsourcing, off-site outsourcing, or offshore. (RNDNM2)

In addition, they felt that a poorly conducted diagnostic exercise could have negative long-term consequences on the organisation:

> [They include, for example,] failure of projects or unexpected project delays at the beginning. Project team members are uncertain how make best usage of the offshore partner.... A long-term risk for the company is to lose technical knowledge and skills. (RNDMM2)

5.4.1.3.2. Strategy for Change

The participants unanimously cited the importance of change strategy to the success of the offshore initiative. For example, one middle manager asserted:

> The strategic objectives should be clearly communicated at all levels; the entire organisation should have a clear understanding of the direction. All resources should have a clear understanding of their expected involvement in the process [i.e. offshore]. (RNDMM3)

However, several participants were dissatisfied with the strategy and felt that it was deficient. For example, the senior manager stated:

> It [i.e. offshore outsourcing] changes perspective. It is an opportunity. Positioning it [is] critical in terms of the message. People need time to work through the emotions required from this change. This has to be part of the plan. Right now there is [no such] plan. (RNDSM1)

Similarly, the non-managerial employees commented:

> First of all, we should have a clear, long-term oriented offshore strategy. This includes the objectives of the offshore and what and how we are [going to deal] with offshore. Secondly, a right cost model (not only the billing rate) should be established so [that] a right offshore partner could be selected and we can get most from this engagement. Thirdly, internal resources must be appropriate or adequate for [implementing] the offshore [initiative]. Fourthly, the complexity of the project[s] should be carefully analysed since it will determine what is the best offshore model for it: [i.e.] 100 percent offshore, off-site and offshore, on-site and offshore, and the percentage distribution for those combinations. Next, both (i.e. offshore and client) management teams' understanding and support are also important. Last, business and technical documentation (methodology, procedure/process, and content/information accuracy) needs to be mature to fit in offshore needs [of the ISD]. (RNDNM2)

5.4.1.3.3. Change Implementation Planning

Concerning change implementation planning, the understanding of the appropriate role of the change management team and its members was mixed. For example, the senior manager felt that the CMT's role was to:

> Provide resources, such as people and money. (RNDSM1)

By contrast, the middle managers felt that this team should provide:

> Strategic direction and clear decision [making]. (RNDMM1)

The non-managerial employees believed that the CMT's role was to:

> Ensure the offshore success, which includes strategy and cost model establishment, business engagement supervision, working process, escalated issue handling, and engagement auditing. (RNDNM2)

Furthermore, they perceived the role of the team members as having:

> A very strong voice and [having] a lot of influence over how this [i.e. offshore outsourcing] would be perceived, both by business customers who'll definitely be affected by this and also the people within the IS organisation. (RNDNM1)

Comments attributed to the early identification of benefits and its delivery related to the change involved expectation setting, increasing value to customers, money and time savings, increased productivity, and improved internal processes. For the senior manager

and non-managerial employees, expectation setting was a major concern. The senior manager commented:

> Deal both up and downward with people. Explain to management why it is interesting to look at it [i.e. offshore outsourcing]. Manage expectations upward. To downward [i.e. employees], reinforce the message that there is no risk of losing their job[s]. (RNDSM1)

A non-managerial employee countered:

> I can recall that in a lot of the discussions we had about going offshore, it sounded like a panacea where things would be perfect and we are spending so much less money, we are getting the top people and you know this is just going to be great.... I would definitely say there is a gap between the picture that was painted and what we are finding, and that's a bit risky because it didn't help us to prepare for what we have. (RNDNM1)

For yet another non-managerial employee, the benefits included:

> Increased system value to our customers in a short, if not shorter, time period. (RNDNM3)

On the other hand, the middle managers were more concerned with overall savings in money and time, increased productivity, and improved internal processes. In addition, they believed that the senior management should:

> Communicate on directions, required changes and expected benefits as transparently as possible. (RNDMM3)

To several participants, stakeholder management represented an important aspect of planning. To the non-managerial employees:

> The main lesson is that involvement and awareness of those who need to be engaged to ensure the success of the change is critical to the success of these initiatives. (RNDNM1)

Nevertheless, they felt that:

> [They] had little to say about who or how it [i.e. offshore outsourcing] was going to be implemented. (RNDNM4)

For the senior manager and middle managers, buy in from different stakeholders was a critical success factor. A middle manager noted:

> Buy-in from the team [organisation's members] that this approach [i.e. offshore outsourcing] is valuable and is worth the pain of clear and concise communication, time difference, extra documentation efforts. (RNDMM1)

The senior manager explained that stakeholder management entailed:

> Giving people a heads up.... Make people think they are involved in the change. Emphasise what people can gain from the change and start from that. (RNDSM1)

This senior manager reiterated the importance of employee participation in the offshore initiative during the direct observation of a management staff meeting:

> I want to say that it is clear to me that the success of our offshore platform will not come from me or from the line managers but from the ability of our project teams to leverage this pool of resources and to do what it takes to get it working. (RNDSM1)

In reference to resource allocation, the non-managerial employees stated that the internal resources (i.e. ISD's) allocated to the offshore initiative were inadequate to ensure smooth and successful execution of projects. Further, because of the complexity of some of these projects, the internal resources allocated to the initiative needed to have a deeper understanding of the business processes and technology as well as strong communication, coordination and project management skills.

Only the non-managerial employees were concerned with education and training. They indicated the absence of any interventions to equip them with knowledge and skills to effectively perform their new job roles associated with the change. Nonetheless, they were conscious of the effect that education and training would have on their work. They felt that the long-term consequence of offshore outsourcing:

> Will force the company to foster, at minimal, highly knowledgeable and skilful internal resources (using offshore as an additional implementation labour pool) and establish a cost model for better and more efficient outsourcing management. (RNDNM2)

In general, both the non-managerial employees and the middle managers considered feedback mechanisms to be essential for maintaining control of the offshore initiative as well as for reporting progress. As non-managerial employee opined, feedback mechanisms help to:

> Recommend and provide information to Sponsors for strategy and cost model, day-to-day offshore management (working model, process, progress, and resources), provide project and technical leadership (including business requirements, specifications, designs, and implementation supervisions), and provide feedback for auditing [offshore team activities]. (RNDNM2)

For example, during the observation of a weekly meeting with the offshore staff, the same employee highlighted the role of feedback in resolving operational issues:

> Thanks for the quick feedback and efforts. The confusion started when [internal staff] found an unknown process ledger file in the testing environment and I looked at the implementation package and found more undelivered pieces.... In order to avoid such confusion, my suggestion is to keep development and testing environments clearly separated. Let [the internal staff] handle the testing environment, and you [i.e. offshore team] should use the development environment for whatever testing needs. Since the implementation package will have both delivered or undelivered processes mixed, I will let them [i.e. internal staff] know that if they run the [Tibco] Designer tool, some unexpected things could happen. At least, you should not directly run Designer on [the] testing environment. On the other hand, I agree with you that the implementation package can have both delivered and undelivered processes, as long as the deployed package and document clearly state what processes should be deployed. (RNDNM2)

To the middle managers, feedback devices were critical for managing project activities as well as reporting progress and problems to upper management, and felt that control mechanisms should be developed and put in place prior to starting any project.

The middle managers and the non-managerial employees described vendor selection and sourcing through reference to: i) the operating model, and ii) selection of appropriate vendors. Commenting on the operating model, a non-managerial employee noted:

> We are using a model that is really more staff augmentation...that's fine. The problem is, I am not sure the people who are going to be using the resources understood that going in...just kind of painting the picture, an accurate picture, is something that may be we struggle with a bit, its new for all of us, so we went in all thinking "oh great", "problem solved", "we had no money", "it's ok", with this small amount of money we can get the same thing done, and I think we are really having to adjust to the fact that "nothing is free, everything comes at a price". (RNDNM1)

For the middle managers, the operating model:

> [Needs to provide] increased flexibility in adding/removing resources to/from projects. (RNDMM2)

With vendor selection, the non-managerial employees expressed dissatisfaction over the existing process:

> A right [operating model that is based not only on costs, but also other factors] should be established so a right offshore partner could be selected and we can get most from this engagement. (RNDNM2)

The middle managers also emphasised the importance of selecting the right vendors by stating:

> Don't rush, be clear on your expectations and verify that these are understood and shared by the offshore partner. (RNDMM2)

Based on the ISD's request to put performance measures in place, the offshore vendor had developed a web-based system to track performance indicators at the programme level and the tool provides metrics on the number of resources allocated per project, number of mandays consumed by each project, number of projects delivered on time, number of projects delayed, offshore staff attrition data, etc. To the senior manager, the following areas were of main concern when it came to performance measurement:

> Not delivering projects on time. Projects that run over the budget. Reduction in service levels. (RNDSM1)

By contrast, the middle managers were less concerned about these quantitative indicators of performance, but were more concerned with qualitative indicators such as:

> Frustrated project [managers].... Frustrated business users due to delays or incorrect functionality that is delivered [by the offshore team which] does not meet the requirements. Large amounts of time spent by the project [managers] on clarifying requirements or functional specifications [to the offshore staff]. (RNDMM1)

The non-managerial employees, on the other hand, were interested in both qualitative and quantitative indicators described above. However, they stressed the importance of the quality of the deliverables that the offshore staff produced.

5.4.1.4. Implementation

Despite senior management's understanding of the importance of communicating the vision and strategies to the organisation, only a modest effort was made at the beginning to inform the employees about the change initiative. This understanding, for example, is demonstrated in the senior manager's quote:

> You have to make change good or bad. Again, hammering on communication. Communication must have as a goal managing expectations of the target of the change. Giving people a heads up. Getting their buy in. Make people think they are involved in the change. Emphasise what people can gain from the change and start from that. (RNDSM1)

Yet the employees did not feel that the communication adequately addressed their concerns about the impact of the change on them. Both the middle mangers and the non-managerial employees stressed that a continuous focus on communication was necessary. In the words of one non-managerial employee:

> There is a constant feeling that there is lack of communication. (RNDNM1)

The middle managers believed that the senior management had the responsibility to clearly communicate the objectives of the change and to set realistic goals for the organisation. One middle manager stated:

> Don't leave your employees "in the dark" about the upcoming changes. Tell them exactly why the change is done, what are the expected benefits and risks, and what is the company expecting from them to make this change successful. (RNDMM2)

Without a clear picture of what the organisation wants and needs, they felt that:

> [They did not] know how to get the most from the deal [i.e. offshore initiative] and still keep the win-win situation. (RNDNM2)

In terms of the implementation approach used for executing the change, the middle managers and non-managerial employees maintained that the change was driven from the

top by the ISD's senior management and there was insufficient dialogue across the organisation. For example, one middle manager declared:

> I do not consider myself to be in a relative state of power today with regards to the offshore model so I can reflect on this item. The current business process change [i.e. offshore] was quite difficult, as it instantly appeared mid-way through the project with little notice or preparation. The team had little to say about who or how it was implemented. (RNDMM1)

Commenting on transition management activities, the participants stated that getting the offshore engagement to work required new project controls to be put in place, including establishing new processes and procedures, following good practices around documentation, defining extremely detailed business requirements and functional specifications for software development and testing, increased communication efforts, and knowledge transfers. They felt that these activities were challenging and had to be closely managed. For example, in describing the transition management experience, one non-managerial employee reflected:

> I think, [in the] short term there is a lot of pain, a lot of learning, and a need to just recognise nothing great happens overnight, it really takes time to build something meaningful. (RNDNM1)

The senior manager believed that it was up to the senior management (i.e. members of the CMT) to identify pilot projects in the ISD to demonstrate feasibility of the offshore service delivery model.

Concerning management of the day-to-day IT operations, the majority of the participants felt that communication and cultural differences were the most important issues they faced and that these had a direct impact on the quality of project outcomes. For example, one non-managerial employee explained:

> When you are working with the team with significant resourcing offshore…you are missing a lot of the communication, we don't have the body language and, in some areas, you really have no idea how what you are saying was received. And, another thing that affects is really culture. So, for us, what our expectation is when we get responses or when we ask questions or when we make suggestions [to the offshore staff] is…in a culture people can nod or say yes and mean I hear you, as supposed to I understand you. So, that is really understanding for us, having a better background in what something really means, how you can interpret it, is I think pretty important. (RNDNM1)

To address these challenges, the middle managers and non-managerial employees stressed the importance of good collaborative technologies such as speakerphones, video conferencing, web conferencing, a common repository for storing documents, and a collaborative space to exchange ideas.

With respect to managing resistance, the middle managers stated that resistance by internal staff to the change had been expected and that it was being addressed at the operational level. One middle manager explained:

> Fear of the unknown is probably the most dominating factor. (RNDMM1)

The strategy for minimising resistance entailed generating awareness through communication activities and gaining the support of project managers. By taking a baseline of the communication activities, the middle managers had planned to monitor the difference in the level of resistance that occurred during the change process. The non-managerial employees, especially the project managers, believed that they could overcome resistance in their project teams as long as the offshore staff effectively delivered on their assigned tasks. However, the employees were concerned about the work force shift from the USA to the offshore region in the short term, leading to job cuts, and felt that the long term consequences could result in knowledge and skills drain, dependency on offshore resources, and reduction in cost savings if work processes were not streamlined.

The statements regarding efforts to create a supportive and positive organisational culture to bolster the change are mixed. According to the senior manager of the ISD, the offshore initiative is critical to:

> [The] adoption of a new paradigm or business model with how services are delivered and this needs to be internalised. When it is internalised we are successful. (RNDSM1)

On the contrary, the non-managerial employees felt that such a cultural shift might pose a risk for the current investments made by the organisation. A non-managerial employee clarified:

> Perhaps the risk I would highlight here today has to do with a company's culture. What we have seen is that, as our company's culture changes, initiatives are rolled back. (RNDNM1)

5.4.1.5. Institutionalisation

With reference to new job roles and organisational design, the non-managerial employees viewed themselves as having the responsibility to perform multiple roles related to the initiative's implementation: i) organising the offshore activities; ii) managing the offshore team; iii) supervising the software design and development tasks preformed by the offshore staff members; and iv) actively participating in the delivery of project deliverables. As part of performing their job roles, they were concerned about reducing redundant, time-consuming efforts. Thus, they took it upon themselves to clarify the roles and responsibilities when they perceived duplication of effort or conflicting assignments between internal and offshore staff. For example, during the direct observation of a weekly meeting, a non-managerial employee, who is a Technical Leader, commented as follows to the offshore staff on the delivery of a system integration process that failed to work:

> The issue [that the integration process failed to work] is not that simple and needs to be carefully analysed. One of [the] issues is to clarify the role[s] and responsibilit[ies] of different groups in integration testing. Now, the situation shows that the different teams are getting defensive and this is not good any more. I already sent emails [to internal staff and vendor management] to arrange meetings separately next week to identify the issues and clarify the roles and responsibilities. (RNDNM2)

These non-managerial employees perceived the middle managers' role as providing:

> Logistical support to the project teams in order to execute and deliver [on] project objectives, not to impede or obstruct the project team in its ability to deliver on customer requirements. (RNDNM4)

The middle managers, too, saw their main role as supporting the project managers in the change implementation and not as decision makers, which was reflected in the following comments from a middle manager:

> Currently I am not in the position of power to make any decisions...top level management makes the decisions. (RNDMM1)

On the other hand, the senior manager felt that both the middle managers and the non-managerial employees:

> [Have] to adjust a little bit on how they do their [current] job. (RNDSM1)

It was mainly the non-managerial employees who noted the lack of reward systems to recognise and encourage experimentation and change. They felt that there were currently no incentives for adopting new behaviours that would serve the needs of the offshore initiative. Irrespective of the presence or absence of rewards, they felt that:

> [The] internal staff needs to be willing to make changes necessary in order to work with offshore staff to have success in the project. (RNDNM3)

With respect to the quality of organisational learning for improving organisational effectiveness, the non-managerial employees maintained that developing an understanding of the lessons learned during the change process was itself a sign of successful change management. Further, the application of what was learnt from other change initiatives indicated a more thorough treatment of the change process. For them, the main lesson from the current offshore initiative is that involvement and awareness of those who need to be engaged is critical to the success of any change initiative. Through a regular audit of the lessons learned, they felt that progress towards the realisation of the vision and objectives could be gauged.

In conclusion, in terms of sustaining the change, the senior manager of the ISD opined:

> It is difficult to measure. It has to do with the energy within the organisation.... How well the change process has been integrated into the organisation is the key. You can measure the budget and the deliverables per year. (RNDSM1)

To the middle managers, it represented putting in place procedures to control and use the offshore resources, establishing relationships between key people on both sides (i.e. vendor and ISD), and a periodic pulse check on the combined team's health. Further, they noted that since the organisation exists in a continuously evolving environment, specific initiatives (such as offshore outsourcing) geared toward adapting to the environment should be seen as an ongoing process, rather than as an end in themselves. The non-managerial employees, for their part, emphasised that it involves reaching an

organisational state where working with offshore staff is efficient and smooth, internal people have required skills to provide leadership for the offshore engagement, and cost-effective benefits are gradually shown. According to a non-managerial employee, this state is reached when:

> Everyone on the team [i.e. both vendor and ISD staff] understands how the team can cohesively work together to deliver on goals. The team understands fully what other team members are capable of, their limitations, if any, and project expectations. (RNDNM3)

However, they were concerned that when the change is not sustained, the organisation would retreat to old practices for delivering the projects.

5.4.2. Case 2: Corporate Information Systems Group

5.4.2.1. Organisational Background

The Corporate Information Systems (CIS) group is the largest information systems department within the company and it consists of three subgroups, Applications Architecture Integration and Standards (AAIS), Global IT Infrastructure (GIT), and IT Planning and Programme Management (PPM). The heads of each of these subgroups report directly to the CIO. The primary objective of the CIS organisation is to service the common IT needs of the company, including the four ISDs.

The mission of AAIS is to provide shared (i.e. centralised) services to the enterprise in the area of application software, including setting IT standards for applications, providing subject matter expertise, optimising the integration of applications for key projects, and supporting competency centres for enterprise resource planning systems, for example, e-learning and web-based applications. It seeks to develop and promote IT architecture strategy and standards in order to foster seamless integration of IT solutions at the enterprise level. Further, by delivering shared services for application software, AAIS aims to enable the IT organisations to efficiently respond to IT solution requirements at the enterprise level and build the foundation for IT globalisation and integration. In order to meet these objectives, the AAIS is required to maintain a staff with a high level of technical and business competencies.

The services provided by AAIS can be categorised into three broad categories: i) operational services; ii) standards services; and iii) architecture services. For example, the operational services stream consists of providing a comprehensive set of functions in support of enterprise resource planning platforms (i.e. SAP systems) and application operations around the globe. More specifically, AAIS provides i) Enterprise Application Integration (EAI) services to those applications willing to develop and run EAI-based interfaces; ii) Enterprise Content Management (ECM) services to support document management, web content management, and web site management; and iii) Web Application Services (WAS) for support of web site development and maintenance. The standards services stream establishes technical IT product standards at the enterprise level, including products that are being used currently and those being proposed for use

within the company. The architecture services stream is dedicated to providing guidance and support to the ISDs through participation in projects with enterprise-wide impact.

The GIT subgroup is the largest of the three subgroups in the CIS organisation. It is responsible for developing the strategy, ensuring operational effectiveness and delivery of all aspects of PharmaCom's enterprise-wide IT infrastructure. This includes recommending the strategic direction and architectures for the company's overall IT infrastructure, along with proposing standards and associated governance for all requisite technologies worldwide. This group also oversees information protection and the development of various metrics to quantify the effectiveness of IT delivery in support of business priorities.

The GIT subgroup's objectives are to facilitate technology standardisation and strategic planning on a global level, while delivering services that meet business requirements at the local level. These objectives allow the entire IT infrastructure lifecycle, from planning to renewal, to be managed in one organisation.

In late 2003, GIT embarked on an enterprise-wide effort to enhance the quality and consistency of IT infrastructure services and assets on a global scale, while producing significant cost savings for the company. This effort resulted in the launching of a programme comprised of several initiatives to harmonise and consolidate processes and systems as well as to improve end-user satisfaction and to maximise the value derived from IT assets. For example, one initiative was to create a global service desk, regionally distributed, with common and integrated processes and technology. In so doing, this initiative aimed to streamline the nearly 77 service desks in 83 countries, which together serviced nearly one million calls per year from over 50,000 users. Another initiative was launched to consolidate 13 data centres into four regional data centres capable of providing optimum service levels, system performance, security and flexibility. A third initiative sought to forge a single, global set of process solutions to drive service delivery management and execution. A common information platform initiative was launched to support these process solutions by providing one global information set encompassing the entire programme.

The PPM is the smallest subgroup within CIS organisation. It is responsible for the IT organisation's overall strategic planning, programme management of cross-functional initiatives sponsored by the CIO and the IT organisation's leadership team, managing

global third-party supplier contracts and the project portfolio (enterprise-level IT projects), and the development and implementation of project management, methodologies and practices. This subgroup was tasked with the responsibility of conducting and implementing the company-wide offshore initiative, including its strategic planning, benchmarking, performance management, as well as leading the initiative's change management team (i.e. CMT).

The key challenges facing the CIS organisation in 2003 included an IT environment that was very complex, too widely distributed and in need of standardisation. These challenges were compounded by the steadily increasing user demand for IT services. The challenges were created in part due to a lingering effect of the merger that had created PharmaCom, which brought together disparate processes and a country based, rather than globally based IT organisation. This is a common situation faced by many companies with a wide, global reach such as PharmaCom that must administer an expansive IT landscape.

In order to address this situation, the CIS organisation was expected to streamline and optimise services, assets and processes, while achieving overall cost reduction. Thus, the senior managers of CIS came to view offshore outsourcing as a way through which the increasing demand for new application systems and other IT services could be met. They saw the offshore model as scalable to meet higher demands, while producing significant cost savings for the company.

In early 2004, the CIS organisation planned to contribute three projects to the offshore initiative. In the AAIS subgroup, two components of the ECM service (the development and maintenance of the web content management component, and service desk operations) were selected for offshoring and these two components together were projected to yield a total savings of $500,000 per year. In GIT, the creation and operations of the global service desk was selected for offshore outsourcing. Both AAIS and GIT created their own PMOs to manage project scope and technical specifications, quality control, oversee operations, and monitor performance.

5.4.2.2. Context

The use and adoption of offshore outsourcing in the CIS organisation was influenced by both external and internal contextual factors involving economic considerations and resources, respectively.

5.4.2.2.1. External Forces

The economic forces result in pressures to reduce the overall costs of IT operations at the enterprise level while increasing the organisation's productivity. For the non-managerial employees of CIS, offshore outsourcing represented a means of augmenting the organisation's technical expertise in critical technology areas as well as the capacity to deliver a range of IT services at a relatively lower cost. They commented:

> Monetary savings and widely available expertise...at the time, urgency of experienced and affordable solution [i.e. IT services] was the main reason for the IT offshore initiative. (CORNM1)

> High costs associated with [local] contractors, and the need to disengage from low-value tasks such as maintenance and monitoring. (CORNM4)

For the senior managers, offshore outsourcing provided the company with competitive advantage through cost savings on IT services that were currently being rendered by expensive onsite contractors:

> PharmaCom wants to gain competitive advantage. We seek more value for less cost. Anything deeper is less relevant. (CORSM1)

It appears from the responses that the participants did not believe political/legal forces to be important factors in the decision to use offshore services.

Based on the responses, it seems that the participants did not consider technology forces as driving the adoption and use offshore service delivery within CIS organisation.

5.4.2.2.2. Internal Forces

In terms of internal forces driving the change, the participants did not perceive the offshore initiative to be an outcome of action by the executive leadership in response to perceived external pressures.

The participants described the lack of human resources to meet the increasing demand for IT services as one of the key drivers behind the decision to use offshore outsourcing (or the 'offshore experiment', as one participant described). The non-managerial employees explained:

> The primary consideration was availability of internal (human) resources to fulfil customer demand for service. Using an offshore team enabled us to afford 6 additional full-time resources versus 1 to 2 additional resources had we hired new, internal employees (this is based on current budget availability). The result was an increase in quality support for customers, plus internal resources were freed up to focus on other critical activities that were not [related] to outsourcing. (CORNM2)

> Lack of internal resources for good coverage as a service desk through most of the day (i.e. we had only eight-hour coverage but we wanted at least 16 hours-a-day coverage). (CORNM3)

They viewed total outsourcing of projects (based on fixed-price contracts) as allowing the internal staff members an opportunity to focus on improving their knowledge of business and technology, instead of spending most of their time on supervising contractors who are onsite working on projects, which they considered to be a low-value activity. One non-managerial employee, however, expressed caution with this approach:

> It will help the company focus on core competencies, [but] it will create dependence on external resources, which can be a liability. (CORNM4)

In contrast, the senior managers described internal resource constraints in terms of the need to leverage external resources to optimise the overall work performed by the CIS organisation.

5.4.2.3. Diagnosis and Planning

5.4.2.3.1. Diagnosis of the Need for Change

The participants did not see establishing a sense of urgency as important for guiding the organisation through the initial phases of implementing the offshore initiative.

They, however, recognised the value of developing a vision for the offshore initiative and identified key elements involved in creating an effective vision. For example, the non-

managerial employees stated that the vision should broadly focus on achieving long-term objectives. A non-managerial employee summarised the current situation in the following manner:

> The number one mistake made when managing large-scale projects such as this one is tunnel vision. Implementers see an end benefit, but don't take time to weigh the pros and cons of the project, or look at the potential pitfalls along the way. It is crucial to step back and [take] a 10,000-foot view of the situation, to better understand the path forward.... I have been through the "tunnel vision" approach to project/change management and have seen the result. A failed project, several million dollars gone to waste, and two people dismissed from the company where it happened. The problem? They focused on the details without ever realising the "big picture". (CORNM2)

The senior managers also recognised the role of vision in developing a strong change management team. One senior manager commented:

> To be the change agents that move the organisation towards being more effective and more value oriented. It extends beyond this initiative. [It is about] making GIT a value added organisation. (CORSM3)

Both the senior managers and the non-managerial employees identified the need for data gathering and analysis in the development of a change strategy and for planning the change implementation. For example, a non-managerial employee pointed out that:

> Standard business and IT processes need to exist in place, prior to the offshore initiative. Offshore outsourcing is not a good idea for projects where the processes are nebulous. Ability of the offshore vendor to accommodate the changes or deal with issues that might arise at the client, and communication between the offshore vendor and client must exist at different levels and they all have to be coordinated. (CORNM5)

A senior manager explained that it was especially important for the organisation to engage in data collection and analysis because of the relative newness and maturity level of the offshore service delivery model:

> There is no model that you can simply apply.... [Nevertheless] this is a great opportunity to add value through a different delivery vehicle. Using global availability of resources. Variable cost structure. (CORSM1)

5.4.2.3.2. Strategy for Change

The participants generally recognised the importance of change strategy to achieve the vision of the desired outcome of the offshore initiative. The non-managerial employees believed the current strategy failed to consider a number of factors, such as employee participation, which are critical to achieving the change. They believed that a sound strategy should:

> Provide direction and commitment, and provide practical guidelines for using the offshore service delivery model. (CORNM4)

The senior managers, for their part, viewed their role in change strategy formulation as:

> Inject[ing] ideas about how the initiative should be structured. (CORSM1)

However, one senior manager went further to describe why it was important for the change strategy to win the trust of stakeholders, particularly employees:

> People are in the hallway talking about how worried they are about losing their jobs, even if management assures them that it is not going to impact jobs. The industry is down, plus there is a freeze on hiring. All of this leads people to be concerned that what management said may not be reality. (CORSM2)

5.4.2.3.3. Change Implementation Planning

The participants described the change management team in terms of its characteristics and roles. For example, the non-managerial employees felt that there was not a strong commitment to the change at the senior management level of the CIS organisation and expressed their dissatisfaction this way:

> Sadly, I am yet to experience a good instance of change without facing any ill effects. Large-scale organisational changes in my experience have often been disastrous and you need strong leadership and vision to implement changes of this kind. (CORNM5)

They believed that the CMT's role involves:

> Belief in the approach [to change] and acknowledgement of the value, communication to the organisation, and empowerment of middle management. (CORNM5)

In addition, to be successful, they believed that this team must be open to new ideas and concepts and must adopt a nimble management style to overcome setbacks. For their part, the senior managers appear to have recognised the benefits of creating an effective change management team. They declared:

> We have created the [CMT]. We should be embracing offshore as an opportunity and not as a threat. [We] took people [i.e. senior managers] on to the team so that, if they are on board as evangelists, there is a better chance of success. VPs [Vice Presidents] delivered that [i.e. senior managers] to the team when it was kicked off to begin with. (CORSM1)

In terms of its roles, they stated that this team:

> [The CMT] will influence and help orchestrate (i.e. "conductor") the human resource component of the change but not implement it.... Support and promote the initiative. Inject ideas about how the initiative should be structured. (CORSM1)

> [The CMT] will proactively, within their area of responsibility, [be] proving out whether or not this business model [i.e. offshore outsourcing] works. (CORSM3)

However, they cited challenges related to performing these roles and hence the need to:

> [The CMT should] look for opportunity. [For example, by] trying to communicate, making visits [to vendor sites], etc., but there are significant limitations. (CORSM2)

With respect to the outsourcing initiative, the participants described the identification of benefits and its delivery in terms of cost savings, use of internal resources, business processes, and value-adding activities. For example, the senior managers stated the importance of highlighting the value-adding aspect in offshore outsourcing as part of benefit identification:

> People are inherently fearful of change. When there is a fear of loss of job security, it becomes a large obstacle. [We] must figure out how to get past the fear and [state] what is the value. [To do so, we need to] identify opportunities [that] add value and [that] don't shift value. Offshore is a threatening terminology as opposed to seeing it as adding value. (CORSM1)

The non-managerial employees felt that the senior management had not clearly identified the benefits expected from the change. They emphasised that it was necessary to demonstrate the following benefits emerging as a result:

> In the short term, you might end up incurring an overhead as is with any new team, however, it is very beneficial in the long run with respect to the budget.... [We should] allocate budget with the vision of what [will] benefit the organisation in the long run. (CORNM3)

> [Some of the benefits that can result from offshoring are] optimal use of internal resources, well-defined business processes, both internal and external, and cost savings and profitability. (CORNM5)

Concerning stakeholder management, the non-managerial employees stated that the senior management had not taken proper account of the concerns of the internal stakeholders (including employees) when managing the change. As a result, they believed that customer adoption and satisfaction was low. They added that the sponsors had the responsibility for:

> Selling the concept being utilised [i.e. offshore outsourcing] to internal employees (i.e. user adoption). (CORNM2)

The senior managers acknowledged that expectations for internal stakeholders had not been managed well. They stated that there has to be a consensus among the different stakeholders; everyone must buy into the initiative for it to be successful.

As for resource allocation to implement the change initiative, the non-managerial employees felt that there was an '...initial high investment of human resources without adequate returns in the short term' (CORNM4), and that the goal should be to use internal resources in an optimal fashion over the long term. Senior managers viewed their role, with respect to resource allocation, as follows:

> [Being] supportive, active participants in the change, remove roadblocks, provide resources, reinforce messages, and protect you [i.e. employees] from risk associated with your [i.e. employees'] role. (CORSM3)

Opinions about the level of education and training for employees to enable them perform an effective role after the change is implemented were mixed. For example, the non-managerial employees felt that the senior management had taken their skills for granted and the general lack of training in cross-cultural communication had prevented them from internalising critical knowledge about the systems that were developed by the offshore

staff. The senior managers generally recognised the importance of education and training for successful change outcomes to occur, but highlighted difficulties:

> [We need] skill training for people. A lot of learning [is involved] in the midterm. (CORSM2)

> Ten minutes after the message [from the CIO] I heard people talking about it. Not really sure how to manage the re-skilling of the team. It's a very tough proposition. Must educate folks; manage the mindset of the organisation. Complaining is just a sign that you are moving them out of their comfort zone. (CORSM3)

One senior manager explained the risks of not providing adequate education and training to employees:

> [I] do not like when I don't have enough information or knowledge to be able to make my own personal assessment of whether or not I want to be part of it [i.e. change]. Without knowledge of the change path, I would default to the path I already know. Move to another company if not happy with the [change] proposition. (CORSM3)

With regard to feedback and control mechanisms for monitoring the change initiative, the non-managerial employees saw themselves as '...advis[ing] management with best effort to determine what is best for the organisation and then implement it' (CORNM3). For the senior managers, cyclical feedback mechanisms were necessary for programme improvements. They viewed the role of non-managerial employees in this process as:

> Implement[ing] the process [i.e. offshore service delivery model], defining detailed standards and requirements of what [the ISD] needs, receive[ing] feedback from the vendor and provide feedback to them. They have key role in the circular nature of the process. (CORSM1)

Only the non-managerial employees made comments regarding vendor selection and sourcing and these comments revolved around the development of SLAs, SOWs, roles and responsibilities, project scope definition, operating model, and expectations about vendor performance and abilities. From their point of view, 'the senior management had unrealistic expectations about the vendor's performance and abilities' (CORNM4). They stressed the importance of having detailed SOWs, well-defined SLAs and clear roles and responsibilities, and stated that a lack of these created too much dependence on the

vendor's onsite coordinator who was already over burdened. One non-managerial employee offered:

> [We need to have] a well-defined Service Level Agreement. A well-defined Service Level Agreement includes all the details of the processes. Such a Service Level Agreement is portable, that is, you can take your outsourcing needs to another vendor if you're unhappy with the current vendor without much disruption to your business. (CORNM4)

Similarly, they noted the significance of having a flexible operating model and engaging two or three offshore vendors to provide the services so that they stay competitive and focused on the engagement. They commented:

> [We need] a sourcing model that is flexible, be able to review and change system design, be able to prototype the system through several iterations, software usability tests by users to ensure that system meets the criteria, and be able to recode system functionality to fit business needs. (CORNM4)

Finally, they cited the consequences of not having a well-defined project scope or constant scope changes in projects. A non-managerial employee explained:

> We submitted a set of requirements for software design to the development group with offshore resources. The offshore team created a design document which did reflect an understanding of the requirements. My management suggested, "It is only a design. Let them build it, and we'll have them change it until it is correct". This resulted in a product that, when debugged to conform to the design, did not meet the requirements of the original request. Subsequent rework was negotiated and partially delivered. (CORNM4)

Comments related to performance measurement to gauge progress were varied. For example, the senior managers were more concerned with the overall change outcomes and therefore wanted to measure outcomes in terms of cost savings and the level of process integration. For example, one senior manager commented:

> It...depends on measurement of cost savings based on deliverables. (CORSM1)

The views of non-managerial employees were in contrast to that of senior managers in that they were more interested in project or service level outcomes. They observed:

> [Our concerns relate to] reduction in number of outstanding customer problem tickets, reduction in time spent on problem resolution by internal project resources, and high customer satisfaction. (CORNM2)

In addition, they stated that the following signs would generally indicate if the change initiative was not going well:

> i) Decrease in customer satisfaction numbers; and ii) par or increased workloads for internal resources, in areas that were supposed to be handled by the offshore team. (CORNM2)

5.4.2.4. Implementation

When it comes to change implementation, the senior managers underscored the need for communicating the vision to the entire organisation, while this aspect seemed to be of lesser concern to the non-managerial employees. The senior managers asserted:

> One always worries about change. It depends upon communication. You need to understand what the company is trying to do. It is bad when lacking information or no communication. (CORSM1)

> You need to let everyone know that it is OK to go down this path. Even the high ups had an initial aversion to this change. The main problem is job security. [Offshoring] requires open and transparent communication because other industries have done it and people know that it often means reductions [in workforce]. [At the same time,] other initiatives are underway that are frustrating people. [Therefore,] open and transparent communication is very important. All IT employees [should] be the target of the communication. (CORSM3)

Participants of both managerial levels did not explicitly comment on the implementation approach, however, the documentary evidence suggests that the CIS organisation's senior management used a top-down approach to implement the initiative.

The participants described transition management activities through reference to: i) knowledge transfer; ii) creation of process workflows for transitioning responsibilities from internal to offshore staff; and iii) implementation of communication tools, all of which they emphasised was necessary for successful change implementation. For example, a non-managerial employee stated:

> The primary success factors are communications and knowledge transfer. Knowledge transfer was critical to enabling a smooth, seamless transition of customer support from our internal, local resources to the offshore resources. Pre-planning the cutover from local internal resources to offshore resources was the most critical step in the process. This involved creation of detailed process workflows for all processes being undertaken, development of exception procedures, development of escalation procedures, and development of contingency plans for situations such as infrastructure/communication problems.... [These problems include:]

> communication barrier between offshore team and global employee base (due to native language differences); knowledge transfer takes time; differences in problem handling techniques between offshore team and internal team; [and dealing with low] customer adoption and satisfaction. (CORNM2)

Senior mangers, on the other hand, primarily stressed the role of communication tools in transition management:

> Communication tools implementation [are essential] in order to be precise and clear with the new providers [i.e. offshore vendors]. (CORSM2)

The participants did not consider the implementation of pilot projects to test alternative approaches for managing the offshore initiative as an important aspect of change management.

With reference to the management of daily IT operations, the participants cited communication, vendor management, project management, risk management and better use of operational processes and procedures as essential to ensure smooth operations of the offshore programme. The participants highlighted the role played by the PMO in managing day-to-day operations. For example, the non-managerial employees pointed out that '...the PMO is responsible for the different tracks involved in the project delivery' (CORNM5), and believed that the PMO was responsible for 'project management, budget management, initial problem escalation, and overall concept coordination' (CORNM2). They stated that:

> Communication with the offshore team was primarily through an on-site coordinator [appointed by the vendor]. This was the single most important factor. (CORNM3)

> Communication between the offshore vendor and client [i.e. internal staff] must exist at different levels and they all have to be coordinated. (CORNM5)

In their view, operations activities also involved managing risks in the following areas:

> Vendor rewrites design specification, glaring omissions in delivered product, and user refuses to accept software. (CORNM4)

> Lack of well-defined scope or constant scope change. Budget over runs. Communication breakdowns. (CORNM5)

For the senior managers, daily operations entailed:

> Better internal management and project management for [gathering system] requirements and vendor management are critical.... (CORSM2)

Both the non-managerial employees and the senior managers identified management of employee resistance as critical for success of the change initiative. Some non-managerial employees felt that employee resistance posed a significant risk. By way of explanation, they offered:

> Because this is the first major offshore initiative in our company... everything may go fine, or there may be some backlash against the idea of offshore outsourcing by employees who feel that their jobs may be at risk. (CORNM2)

One non-managerial employee summarised the situation as follows:

> At PharmaCom, I was witness to an enormous amount of resistance to the offshore approach, especially from my [European] colleagues. Even after I had proven the value of the approach, a lot of age-old inhibitions prevented the open acknowledgement of the success. There was never an honest acceptance that the offshore initiative was like any other, copious with advantages and disadvantages, and the value lay in minimising the risks while maximising the returns. Instead, there seemed to be an enormous amount of focus on the negatives associated with offshore outsourcing. (CORNM5)

The same employee pointed out the consequences of resistance in the short term:

> Organisational changes associated with offshore initiative [will produce] employee discontent and mistrust. Growing pains [are] associated with any such change. Problems associated with gaps in existing processes [also] come to light. (CORNM5)

The senior managers acknowledged that the organisation was experiencing pain around the acceptance of change in the short term due to employee fear and questions. One senior manager observed:

> Change occurs frequently, but it is not managed. People who like change stay and those that don't leave. Turnover rate must have been huge in the company over the last couple of years. People now are different than those of ten years ago. (CORSM2)

They believed that resistance to the change has not been addressed '...when people are confused and angry. When people shut off, that is, being silently subversive, passive resistance, you know you've gone too far too fast' (CORSM2). From their viewpoint:

> The single most important aspect [of managing change] is human. Dealing with human emotion. PharmaCom must provide time for acceptance. Not being sensitive to the human element [is a risk]. Don't underestimate the fear factor. (CORSM3)

The participants generally viewed the offshore initiative as a large-scale change requiring new behaviours, which would eventually prompt a change in the current organisational culture. For example, one non-managerial employee observed that the change resulting from offshore outsourcing was counter-cultural and therefore difficult for the employees to accept:

> First off, it is never a good idea to initiate a large-scale change using the offshore approach, especially in companies that are culturally resistant to change. (CORNM5)

The senior managers, for their part, noted that:

> [Change initiatives] often start with good intentions but it may not end up that way. Job cuts are a potential impact. It will change the culture of the company. Internal businesses [i.e. customers] will have to understand what the company is trying to do and accept it. (CORSM2)

Finally, the senior managers believed that when the organisational members adopt offshore outsourcing on their own without any prodding, the change has taken root in the organisation's culture.

5.4.2.5. Institutionalisation

In reference to new job roles and organisational design, the non-managerial employees stressed the importance of clearly defining roles and responsibilities for both internal and offshore staff as this would reduce dependence on the vendor's onsite coordinator and help improve communication with the offshore team members. The non-managerial employees viewed themselves as playing a key role in the implementation process and day-to-day operations of the offshore initiative through:

> [Assuming an] enforcement and implementation role, [engaging in] day-to-day communication, [by being] fair, flexible and fearless, and engag[ing] other associates in the change effort. (CORNM5)

Furthermore, they saw the role of middle management as:

> Ensur[ing] operational success, realise the goals set by the [CIS] leadership, and ensure enthusiastic participation of the associates [i.e. employees]. (CORNM4)

On the contrary, from the senior managers' perspective, the non-managerial employees had only a minor role to play in the implementation. One senior manager commented:

> [Employees] have really no role. [We] will get input but [they] have really no role, except [for] people that have experience. (CORSM3)

Surprisingly, only one non-managerial employee expressed concerns about the lack of reward systems or incentives to promote new behaviours to anchor the change. The employee described a past experience of change to illustrate the importance of reward systems:

> Past change management experiences typically were not good. The direction [for change] was coming from the senior management with little or no rationale. However, the rewards and the existing market conditions made the change easier to assimilate. However, with the drop in the stock market, change was not only reversed, but a diametrically opposite change was enforced, which led to a tremendous loss in employee morale. (CORNM5)

With regard to organisational learning for improving performance through better knowledge, the non-managerial employees generally appreciated the overall learning experience associated with the offshore initiative. However, they were concerned that over the long term offshore outsourcing could result in the '...lack of internalised knowledge, which can lead to many problems' (CORNM1). Similarly, the senior managers felt that the offshore initiative entailed:

> A lot of learning in the midterm. [The learning involves] how to better use operational processes and procedures to ensure that the changes really do deliver on the cost savings. (CORSM2)

The participants described efforts to sustain the change in terms of the following characteristics: i) process integration; ii) results; and iii) roles. For example, the senior managers stated that the organisation's ability to sustain the change would '...depend on how well [the offshoring] process is integrated into the organisation' (CORSM1). The non-managerial employees also stressed this process aspect:

> This really depends on the type of change, but from the processes point of view, I think the change is complete upon finalised validation. (CORNM1)

Participants of both categories emphasised that, in order to sustain the change, it is important to deliver results during the change. For example, the non-managerial employees observed:

> First, [ensure that the] change has yielded expected results. Second, [there should be] budget considerations: no excessive [over] runs or money paid for services not rendered, no busy work created, and [any] over runs are due to expanded [project] scope rather than oversights. (CORNM4)

Similarly, the senior managers asserted:

> Look for opportunity in change. Be action oriented. Deliver during change. Try to bring focus in an uncertain environment. (CORSM2)

In reference to roles, the senior managers stated that the leadership, especially the offshore initiative's sponsors, played a critical role in sustaining the change. A senior manager commented:

> [The sponsors should] be the ambassadors of this business model concept. [They should] sell the idea continually [to the organisation]. (CORSM3)

On the other hand, the non-managerial employees stressed their role in sustaining the change through the following actions:

> [The employees need to show:] i) a willingness to grow the initiative, ii) enthusiastic participation in the initiative, iii) show leadership (i.e. leadership needs to be shown at all levels), and iv) a commitment to the process. (CORNM4)

Finally, a majority of the participants in both categories viewed change management as a continuous and ongoing task with respect to offshore outsourcing. For example, the non-managerial employees stated:

> In a project such as ours, change management never ends. Our project is a constantly evolving entity, which means that change management must continually take place to meet the evolution of the company initiatives being supported. (CORNM2)

> In a sense, change management never ends, strictly speaking...you always have to re-invent yourself and the organisation, and find better ways to introduce the change. (CORNM5)

The senior managers noted that change management would end only:

> When it is a daily part of your job. When it's part of PharmaCom. When it's not talked about as offshore but in more personal terms. (CORSM3)

5.4.3. Case 3: Sales & Marketing Information Systems Department

5.4.3.1. Organisational Background

The role of this ISD is to support the IT strategy and operational needs of the Sales & Marketing division on a worldwide basis in the areas of sales, marketing, medical, business development, distribution and order management. It supports nearly 31,000 internal business customers in these areas. It enables best and common business processes by providing standard technology solutions, maximising the use of IT competencies across the division's geographically distributed sites, ensuring that existing solutions can be reused market-to-market, all while providing day-to-day operational support.

The ISD has 525 people spanning six geographical regions (North America, Latin America, Japan, Germany, France, and Europe and Intercontinental) and is led by a Vice President who functionally reports to the head of the division. The ISD organisation was restructured worldwide in 2002 to align it better with the division's business objectives.

The major objectives of the ISD are to:

1) Earn outstanding internal customer satisfaction with highly responsive day-to-day support and high quality delivery on the project portfolio. Business continuity is the number one priority.

2) Support the delivery of best practice business processes with standardised IT solutions worldwide.

3) Utilise the Knowledge Centres to enhance and standardise the business processes and associated IT solutions.

4) Manage resource allocations (people and budget) optimally in collaboration with the business partners and prioritise these allocations based on: i) business continuity; ii) global transformation projects; and iii) country projects.

5) Develop a business partner relationship by bringing value added, innovative, and cost-effective solutions to the business.

The organisational restructuring reflected a change in mindset and a new way of working for the ISD's employees, including working across geographically distributed sites as virtual teams developing common solutions, sharing experiences to accelerate delivery of IT solutions, and prioritising time to ensure business continuity while delivering the

strategic new project portfolio. By empowering teams to work across boundaries to share ideas and implement solutions, the ISD attempted to transform the division's business.

According to the head of the Sales & Marketing division, IT can speed the transformation of the commercial process as digital tools make it easier to become more collaborative, ambitious, disciplined, and data-driven. In 2000, the division's leadership identified the digital revolution as a mega trend within the pharmaceutical industry and made a commitment to e-business because it had become clear that the division must move quickly and aggressively to leapfrog the competition. Following a two-day e-business workshop, a total of 11 initiatives were identified for further exploration.

A successful example of these initiatives is e-detailing which aimed to increase the direct-to-physician marketing channels via the Internet. This application provides the electronic equivalent of a physician visit by a sales representative, utilising video-graphic presentations and Internet-enabled communication media. It has helped the division's sales representatives to complete as many as 20 calls per day using video presentations for up to 10 minutes each covering two-to-four products.

In recent years, the ISD has demonstrated its role in achieving the business objectives of this division, from the fundamental reliance upon personal computers by remote sales forces to achieving best-in-class market segmentation and targeting. The division relies upon IT solutions that enhance business processes and provide competitive advantage. More importantly, the division has come to depend on the ISD to effectively and reliably run its daily business.

Following the company's decision in 2002 to grow its pharmaceutical business, the ISD witnessed a sharp increase in demand for new application software to enhance business processes and gain competitive advantage. At the same time, the ISD was experiencing pressures to reduce its overall operational costs. To the senior managers of the ISD, offshore outsourcing represented a way to accomplish both objectives. Moreover, the ISD was facing a shortage of technical skills, particularly in new technologies such as Microsoft's VB.NET, and the senior managers recognised that offshore outsourcing would enable the ISD to bring into its fold highly skilled resources tailored to its needs at a relatively low cost. Thus, in 2002, they decided to proactively test the offshore service delivery model on a small scale. By the time the company-wide offshore initiative was launched in late 2003, the ISD had already experienced successful delivery of a project

using the offshore service delivery model and two more projects were under implementation. Based on their experience, the ISD's senior managers fostered its company-wide adoption and convinced the CIO that it could be implemented in other parts of the IS organisation, thus leading to the adoption of offshore outsourcing at the enterprise level.

Because of their prior experience and knowledge of offshore outsourcing, the senior managers of the ISD were able to play a key role in shaping the company-wide offshore initiative, including defining the initiative's scope, developing the strategy and operating guidelines, identifying critical success factors, and planning the implementation. In early 2004, the ISD had identified 15 projects (including those that were started before the launch of the offshore initiative) for potential offshore implementation, with a number of them to be delivered on a fixed-price basis, thus representing significant savings for the ISD. To illustrate, the ISD expected to save at least $1.25 million per year from just two of these 15 projects. The ISD constituted a PMO to oversee operations, handle vendor management, compliance with quality and regulatory requirements, and track and report performance.

5.4.3.2. Context

As in the case of the R&D ISD, the internal and external context of this business division provides important information for understanding the ISD's experiences with the offshore initiative.

5.4.3.2.1. External Forces

The decision to adopt and use offshore services in this ISD was largely influenced by economic pressures. The ISD saw offshore outsourcing as an opportunity to increase productivity, while at the same time decreasing costs. A senior manager explained:

> [The pharmaceutical] industry is under economic and financial pressures, this is the root problem. [It is the] tightest I have ever seen. Industry growth was down for the year forcing folks to be pro-actively cost effective. It's about cost. They spend a lot on consulting. How can we spend our consulting money smarter today? Reduce consultants [i.e. local]. (SNMSM1)

The middle managers and non-managerial employees also acknowledged that the industry was experiencing changes and that offshore outsourcing would improve the company's competitive position in the long term:

> Long term, there'll be commoditisation of core IT services (just like the PC to the hardware). [Because of offshore outsourcing] there should be an overall boost to the U.S. business productivity and [it will] make U.S. products/services more competitive globally. (SNMMM1)

> If [offshore outsourcing is] successful [in the short term], the long-term benefit is that the IT organisation is able to meet business demand in a more efficient and flexible way. (SNMNM2)

At the same time, the senior manager, who is also one of the two sponsors of the company-wide offshore initiative, noted that the company should pay careful attention to the implementation of the offshore programme because it could have negative impacts. She asserted, '[The organisation] could lose people quickly. [Although] with a bad economy you can control the turnover' (SNMSM1). However, the middle mangers did not seem to share this concern:

> Since I joined the industry, I have been in a management position. I have always been involved in outsourcing since day one of my employment. It is not a big deal and never was. The only thing that is constant about our industry is change. (SNMMM2)

Based on the responses, it appears that the participants did not consider political/legal forces to be relevant to the decision to use offshore services in the ISD.

As in the case of the CIS organisation, the participants did not consider technology forces as driving the adoption and use of the offshore service delivery model within this ISD.

5.4.3.2.2. Internal Forces

Only the senior manager observed that the offshore programme was a direct result of action by the executive leadership in response to perceived external pressures. She asserted:

> [The] CIO mandated the offshoring initiative. I like this [approach] since it saved time. (SNMSM1)

Most of the middle managers as well as the non-managerial employees believed that the decision to use offshore IT services was also driven in part by internal resource

constraints, although some felt that there were other incentives for the ISD to go offshore, such as quality improvements, fostering process discipline, and ability to adopt new technologies. They explained:

> We have a semi-fixed pool of expenditure for projects, both capital and operational. We needed to find a way to deliver more projects within the financial envelope. We also needed to improve the quality of our [software] applications. (SNMMM2)

> The problem we faced was that we expected to deliver complex solutions in limited budget and with tight timeframes. The group [i.e. ISD] had some limited experience doing offshore projects prior to 2004, and that was on a very small scale. (SNMNM2)

These participants clarified that the ISD staff had some limited previous experience with implementing small-scale offshore IT projects, which they believed had paved the way for the current company-wide initiative. The primary reason for attempting offshore previously was due to cost pressures as well as a growing demand from the business areas of the division for new application systems. More specifically, the offshore service delivery model allowed the ISD to quickly deliver critical application systems and provide business continuity using a small budget, whereas this would not have been possible under the traditional model (i.e. in-house systems development) because it was too cost-prohibitive. During the experimental phase of offshore outsourcing, the ISD had developed three application systems and found that there were significant cost and other advantages to using offshore services. For example, one of these projects aimed to build a common Website Framework and Website Management System in order to design, deploy and maintain a large number of corporate websites faster and cheaper. The websites, which were built and maintained for PharmaCom's affiliates around the world, also had to be consistent in their 'look-and-feel'. The project's scope included some 37 separate websites with similar content and functionality, with each website having its own functional specifications, infrastructure, and technical resources for development and maintenance. The ISD found that the cost of implementing this project using offshore resources was about four times lower (or $173 per resource per day) when compared with the traditional model (which would have cost nearly $800 per resource per day). In addition, using the offshore model enabled the ISD to: obtain quality improvements, handle additional functionality requests using current capacity, and increase the turn-around time for website delivery.

5.4.3.3. Diagnosis and Planning

5.4.3.3.1. Diagnosis of the Need for Change

Generally speaking, the participants did not see a sense of urgency as a motivation for establishing the offshore initiative. Moreover, they did not see developing a vision for change as critical for the success of the offshore initiative. One middle manager reasoned:

> We didn't see this as large-scale change. We previously hired local contractors for our project work. [Therefore,] moving offshore was not seen as a large-scale change. (SNMMM2)

The participants described data gathering and analysis in terms of two characteristics: decision making, and continuous improvement of organisational functions and tasks. For example, the senior manager commented:

> I did not like when sweeping decisions were made without the best set of facts. Not all things [are] considered. For example, just using one financial model when another may [actually] be better. (SNMSM1)

The non-managerial employees, by contrast, viewed this as a continuous process that can be used on an ongoing basis to improve overall organisational efficiency. A non-managerial employee offered the following explanation:

> [E]ven after the [offshore] processes are identified and people become used to them, there is always room for improvement as not every function is better done offshore. Some tasks that are sent offshore can be performed onsite with higher productivity. (SNMNM2)

5.4.3.3.2. Strategy for Change

Only the non-managerial employees pointed out the lack of a change strategy for the offshore initiative and felt that this could impact the organisation negatively in the short term. They cautioned:

> The short term consequences is chaos since people who are set to working in a particular way will get impacted, especially those at the tactical level.... Like in any project, when the communication breaks down, it results in frustration and confusion, and that's a good sign of something not going well. (SNMNM2)

5.4.3.3.3. Change Implementation Planning

Participants of all managerial levels highlighted the role of the change management team in ensuring successful change management. For example, the non-managerial employees stated that:

> Change management must be sponsored by them [i.e CMT], without their support it [i.e. the offshore initiative] will not be a success. (SNMNM2)

The middle managers viewed the CMT's role as:

> Sponsor, target setter, and demander of process and quality. (SNMMM2)

The senior manager, who is also one of the sponsors of the offshore initiative, felt that the CMT had the responsibility to:

> Ensure that people get the right level of support from above [i.e. senior management]. [They also have the responsibility to] manage the scope of the project. (SNMSM1)

With regard to benefit identification and delivery, the responses were varied. According to a middle manager, the key benefits of offshore outsourcing that are to be pointed out are:

> Better quality, more projects delivered within the same financial envelope, better project management skills in-house, better cultural awareness amongst IT staff. (SNMMM2)

Similarly, the non-managerial employees believed that it was not sufficient to point out the cost savings alone associated with this model, but highlight the productivity gains (i.e. more number of projects can be delivered for the same cost). On the contrary, benefit identification was of lesser concern to the senior manager. She was more concerned with:

> Get[ting] us [i.e. ISD] to the point where [the IS organisation] can make the decision regarding whether or not offshoring is a good proposition for PharmaCom [in the long term]. (SNMSM1)

Regarding stakeholder management, it was mainly the senior manager who stated that it was critical to get the various stakeholders involved in the change to influence the outcome of the offshore initiative. She declared:

> Our ability to get our internal business partners ready for this change is also critical. (SNMSM1)

Moreover, she felt strongly that employee involvement in this process was the *key* to ensuring successful change management. She added:

> Eighty percent of the success of this thing [i.e. offshore outsourcing] comes from these people [i.e. employees]. If they are not on-board, it won't be implemented successfully. [They are] responsible for service delivery from a control standpoint with regards to those offshore. (SNMSM1)

The participants, especially the middle managers and the non-managerial employees, felt that the CMT had the primary responsibility for allocating the necessary resources to the offshore initiative. It appears that adequate resources were allocated, according to the following statement from a middle manager:

> We needed to employ three more people to effectively manage our offshore operations, a technical manager, a technical lead and a database analyst, so that we could tell when the vendors were getting off track. We didn't have these skill sets in house prior to our offshore work. (SNMMM2)

Only the senior manager emphasised the importance of education and training for staff to help them perform an effective role in the organisation when the change is implemented. She stated:

> Training people, in order to bring on newer competencies for many of them, is critical [for success]. (SNMSM1)

With the exception of the senior manager, the other participants did not identify the need to develop feedback mechanisms and control systems to monitor progress of the offshore initiative.

With respect to vendor selection and sourcing, the middle managers and non-managerial employees pointed out the critical importance of developing trusted partnerships with offshore vendors for the change effort to succeed. They explained:

> The biggest risks are with working with new vendors, any failure on their part would have questioned the entire model itself.... Building trust with the offshore vendor [is important] so that you can get [the] correct picture from them. This [is] because without open communication from offshore resources it [is] very difficult to gauge the technical issues.... [We need a] trusted partner...if the only reason that projects are being implemented offshore is due to cost cutting, then in my opinion a trust cannot be built. (SNMNM2)

> [By] treating the offshore vendor as a true partner and [by] working very diligently to make them look good. (SNMMM2)

The responses with regard to performance measurement to gauge progress of the change initiative were varied. The middle managers, for example, highlighted the difficultly associated with specifying precise indicators of performance ahead of time. A middle manager opined:

> There is no [one] Key Performance Indicator (KPI). More information is learned through informal communications with the onshore and offshore teams than in formal project review sessions or weekly meetings. (SNMMM2)

The senior manager, on the other hand, pointed out the need for active monitoring in the short term as well as using the Balanced Scorecard as an approach to measure programme performance. She maintained:

> Use [the] Balanced Scorecard to measure the effectiveness [of project or service execution]...[but] proactive monitoring gets turned off in 12-18 months [when the offshore programme is fully implemented]. (SNMSM1)

Similarly, the non-managerial employees noted the important role that performance measures play in the management of day-to-day operations. One non-managerial employee explained that the absence of appropriate performance measures would result in:

> Seeing a lot of re-work due to erroneous deployments of new code; failed re-tests of bugs that were supposedly fixed. (SNMNM1)

5.4.3.4. Implementation

Only the senior manager pointed out the importance of communicating the vision for successful change outcomes to occur. She commented:

> [There is a need for] frequent and clear communications. [Communications play a role in] taking the fear factor out. (SNMSM1)

In addition, she noted that the members of the CMT were playing a liaison role in this process by ensuring the communication between this team and their respective ISDs.

She noted that the team members were especially responsible for:

> Help[ing] with communication from top to bottom. Show that the top management is being very careful with this initiative and that there is no threat of job losses. (SNMSM1)

Although the participants did not specifically comment on the type of implementation approach used, the overall evidence indicates a top-down change driven by the ISD's senior management.

In terms of managing the transition to the new state, the middle managers and non-managerial employees described the need for a robust communication platform and relationship building with the vendor to aid the transition process. A non-managerial employee clarified:

> We utilised various communication tools, informal as well formal so that the same message gets delivered at all levels [of the project organisation]. Exchange programme: we had some offshore resources spend some time [onsite in the U.S.] during the initial period of the project so that they could understand some of the key requirements as well as we could build relationships with key [vendor] resources. (SNMNM2)

They felt that chaos would have emerged in the short term if the transition had not been managed carefully. A middle manager asserted:

> The moment there's a hiccup [in the project], and everyone is pointing the finger at the vendor. (SNMMM1)

Basically, the participants of all managerial categories saw pilot projects as necessary to facilitate the successful assimilation of change, and stated that the CMT was charged with the responsibility for identifying those projects that have the highest chance of succeeding in the pilot phase of the offshore initiative. They noted:

> Basically, change management was handled starting with small projects.... To avoid making a large-scale change from the onset, it's better to start small so that the organisation gets the working model in place before large scale projects can be implemented. (SNMNM2)

> Avoid large-scale change. Do it in pieces. Experiment. (SNMMM1)

> Pilot programmes [are essential].... If they [i.e. the CMT] do a pilot and then it is not followed up on with other outsourcing, it didn't go well.... [The CMT should] select the right projects for offshore particularly at first. (SNMSM1)

The participants described the management of daily IT operations in terms of the following characteristics: communication, roles and responsibilities, work processes, and project management, of which specifying user requirements analysis was an important component. The non-managerial employees described all three of these characteristics as essential success factors for the offshore initiative:

> Clear communication [is needed] in both directions. Clear roles and responsibilities [must be] articulated. Mature software development processes [have to be] in place (source control, release management, defect management, etc.). Substantial use of modelling, preferably UML (Unified Modelling Language), [is also needed]. (SNMNM1)

The middle managers, on the other hand, described the need for work-related processes, project management and improved communication as follows:

> [It is essential to have well-] defined internal processes to interface with vendor. (SNMMM1)

> Improved communications between the onshore and offshore teams was key. Spending additional time and money on user requirements analysis was key. Daily project update meetings [was also essential]. (SNMMM2)

The senior manager described that all employees had a higher role to play in the management of operations of the offshore initiative and believed that their role in project management would create business value for the company.

The middle managers, in particular, pointed out risks to the offshore initiative stemming from employee resistance at the non-managerial level. For example, a middle manager explained:

> Organisational acceptance [is a major risk because of] fear of loss of jobs.... Short term, there'll be lots of anxiety and questions both internally and publicly. (SNMMM1)

The senior manager also acknowledged the importance of managing resistance and stated that the senior management's idea was not to de-motivate the organisation. She believed that, based on her past experience, resistance could be reduced with strategies focusing on:

> Good communication.... People nominated to positions quickly so they knew their end state quickly. [The people] knew [their] roles and responsibilities. People were empowered to implement things the way they saw fit. (SNMSM1)

The non-managerial employees described offshore outsourcing in terms of organisational culture change and felt that in order to achieve lasting cultural change, the change must be introduced gradually so that the organisation can successfully assimilate it. One non-managerial employee commented:

> Cultural change! Offshore outsourcing is all about change in culture, not just with the project team, but also even with the business. It is better to start small and then move onto bigger projects so that the organisation gets assimilated successfully.

For the senior manager, culture change has been achieved:

> [W]hen it [i.e. offshore outsourcing] becomes that this is just the way we do business. (SNMSM1)

The middle managers, by contrast, pointed out the need to select vendor organisations with organisational cultures similar to that of PharmaCom, and perceived organisational cultural differences between the vendor and PharmaCom to be a risk to the change initiative.

5.4.3.5. Institutionalisation

In reference to job roles and organisational design, the participants expressed both frustration as well as satisfaction related to new job roles and organisational design to implement the offshore initiative. For example, a technical non-managerial employee shared his frustration about his new job role that had become non-technical:

> First, on a short term, internal IT staff does not get to develop [systems], and that sometimes hurts morale. Technical people like to keep their skills sharp. Second, there is seldom time for code review, and different people with different skill sets and styles develop the different modules offshore. The result is non-standard code (even though many companies claim to have coding standards, they are seldom rigorously followed). So, maintenance of the code during production support is very difficult in the short-term. (SNMNM1)

On the other hand, the senior manager, who has had a major influence in the design of the organisation, commented this way about the new job roles:

> People have gained new skills (i.e. vendor management). [They] have more interesting jobs. Those [employees] that cannot re-school themselves into the more business facing roles, they will have a tough time being successful in the company. (SNMSM1)

Surprisingly, the participants did not comment on the implementation of reward systems or the use of incentives to motivate employees to adopt new behaviours to achieve the desired change.

In terms of organisational learning for continuous improvement, the middle managers believed that the contribution of non-managerial employees to collective learning and understating was essential to ensuring successful implementation of the offshore initiative. For example, a middle manager stated that:

> [By] not learning about risks [associated with offshore outsourcing] early enough…[will] present a major risk to the organisation. (SNMMM2)

Similarly, the senior manager stated that it was important for PharmaCom to learn from the offshore outsourcing experiences of other companies and described the efforts made by PharmaCom in this regard:

> I have talked to Procter & Gamble people and learned that it [i.e. offshore outsourcing] has worked well. (SNMSM1)

However, the non-managerial employees expressed dissatisfaction with the offshore initiative as a result of their overall learning experience:

> There may be a short-term cost benefit, but I believe the short and long term consequences are more…[even] if the system is successful, and the users want to make many enhancements, building upon a messy code base only makes maintenance and support that much more difficult in the future; necessitating a re-design sometime in the future. Based upon my experiences on two offshore projects, I would not use it [i.e. offshore outsourcing] again.

Finally, when it comes to efforts to sustain the change, the non-managerial employees stated that they:

> [The employees] must accept change, as it's a part of the corporate life. (SNMNM2)

They also believed that change management:

> [D]oes not end at all; even after the processes are identified and people become used to them, there is always room for improvement as not every function is better done offshore. (SNMNM2)

To successfully institutionalise this change:

> [W]ithin each project, a lot of handholding was performed initially so that the onsite project team and the business [users] were comfortable. (SNMNM2)

To another non-managerial employee, sustaining the change represented an organisational state where:

> [T]he users are happy (or content) with the system, the support team is not constantly putting out fires, and the development team is able to successfully roll out subsequent releases on time and on budget. (SNMNM1)

Conversely, the middle managers felt that change was sustained when:

> Offshore outsourcing becomes an engrained IT and business practice. Do we ask where the laptops/desktops that we use are made from? When the organisation stops asking where the IT services come from, then change management will evolve to minimal/nil role. (SNMMM1)

For the senior manager, the change has been sustained when offshore outsourcing becomes part of the ongoing employee communications systems.

5.5. SUMMARY OF CASE STUDIES

The three case studies in this chapter analysed patterns in the perceptions and experiences of change management for the different information systems departments of PharmaCom as judged from the responses of the participants who attempted to plan and implement the offshore initiative. In so doing, the case studies attempted to answer the first part of the study's main research question, i.e. how do IT organisations manage change associated with offshore outsourcing of information technology services. The following chapter, in aiming to address the sub-questions (or objectives) of this study, contrasts the similarities and differences between these three cases and builds support for the findings based on different theoretical propositions.

6. CROSS-CASE ANALYSIS

6.1. INTRODUCTION

The individual case studies provided in the previous chapter, each representing an information systems department within PharmaCom, offer rich descriptions of employee experiences of planning and implementing the offshore initiative within the context of a changing pharmaceutical business environment. These three case studies exemplify change management practices with respect to offshore outsourcing and, in some cases, even reinforce what is already known to contribute to effective change management through the literature. With the results of the case studies given, this chapter focuses on elucidating the similarities and differences between the three cases, focusing on the contextual conditions, processes, contributing factors, barriers, and key issues.

6.2. FINDINGS

Yin's (2003b) idea that the theoretical framework helps to organise the case study analysis is extended here to the cross-case analysis as well. That is, the same basic framework that was used in the case studies is also applied to the cross-case analysis. This framework (i.e. generic process model) consists of four main change process components, viz. context, diagnosing and planning, implementation, and institutionalisation. These components not only provided the basis for comparing the three cases along a common set of dimensions, but also helped to identify and highlight similarities and differences between them, which will inform future change management efforts. By revisiting the evidence and by triangulating results from a review of original data sources, case studies and peer feedback, the author was able to verify results and develop analytic conclusions answering the original research question.

As stated earlier by the author, the aim of this study was to describe and analyse factors which influence the management of change with respect to offshore outsourcing. By using a cross-case analytical framework, the author will be able to interpret the outcomes of offshore programme implementation in the three information systems departments by comparing and contrasting data that are common across the programmes. This approach will also enable the author to analyse the differences in programme outcomes as well as

the factors that contribute to these outcomes. Moreover, the cross examination of offshore programme implementation in the three organisations will allow for new ways of conceptualising and operationalising future change initiatives by proposing a conceptual model of offshore outsourcing implementation.

6.2.1. Context

The contextual factors most commonly identified as influencing the change in the three cases studied originate from sources both external and internal to the company. The external factor driving the change in all three cases is primarily economic, while political/legal and technology factors emerged as contributory in one case. On the other hand, both leadership and resources were identified as factors that were driving the change internally in most cases.

The economic element was identified as a major external factor in influencing the adoption and use of the offshore service delivery model in all cases. According to Knodel (2004), the greatest challenges currently facing the senior managers of IT organisations is prioritising the growing demands for services and aligning IT strategies with business goals, both occurring in a context in which cost containment and improved return on investment are bearing down on executives. In the case organisations studied here, the senior managers perceived increased pressures to improve organisational productivity while at the same time decreasing the overall costs of IT operations. They interpreted these economic pressures as threats to the company's competitive position and advocated the adoption and use of offshore outsourcing as a response to these threats. There was general consensus among employees at different managerial levels that offshore outsourcing is likely to help improve the competitive position of the company in the long term. Such an outcome confirms Tushman and Anderson's (1986) hypothesis that organisations, operating within economic systems, are influenced to a large extent by economic factors over which they have little or no control.

The political/legal element was considered as having a negative influence on the adoption and use of offshore outsourcing particularly in one case. This is attributed to a stringent regulatory environment in which every step of the drug development process is regulated and, as a result, securing approval for drug products has become increasingly difficult for pharmaceutical companies. The recent focus at the industry level on achieving regulatory

compliance and maintaining data privacy is perceived by a small number of employees of the R&D ISD as limiting the wide scale adoption and use of offshore outsourcing. Although the impact of this factor appears to be limited to the R&D ISD, post hoc discussions with study participants (see Appendix G for details of peer feedback) indicate that regulatory concerns were viewed as an impediment even in the CIS organisation:

> The fact that ECM [Project] was hosted on a validated platform [i.e. regulated environment] made it very difficult for making decisions on what could be supported and what could not be as far as the offshore service desk was concerned. (CORNM3)

This finding is consistent with Miller's (2005) research, which found that only half of the large pharmaceutical companies surveyed had a current interest in the offshore outsourcing of development and commercial manufacturing services, and that these companies expected offshore outsourcing to proceed slowly over the next five years.

The technology element was mentioned as a factor influencing the change in one case. Tushman and Anderson (1986) have suggested that the technology element, which tends to evolve through periods of incremental change punctuated by technological breakthroughs, can either enhance or destroy the competence of firms in the industry. In this case, the R&D division of the company has come to rely heavily on genomic information and high-throughput screening technologies to accelerate the drug discovery process and consequently places high demands on IT to manage, analyse, integrate, and distribute the associated large volumes of complex data generated by these technologies. At the same time, a sharp reduction in the cost of IT in recent years has enabled 'computer systems to move from applications for back-office support to those offering significant competitive advantage' (McFarlan, 1984, p.98). Thus, in the pharmaceutical industry, IT not only plays a critical role in assisting researchers to convert experimental data into useful information, but also in helping gain efficiencies of scale from high-volume data management. This outcome here confirms earlier research findings that information technologies are of vital importance to the effectiveness and efficiency in large and complex business organisations and have implications for overall corporate performance (France, Harrington and Maguire, 1987). However, with pressures placed on pharmaceutical companies to reduce the rising costs of drug development, the senior managers of the R&D ISD are interested in adopting strategies, such as offshore

outsourcing of IT services, which enables PharmaCom to extract maximum value from its IT expenditures.

With respect to internal forces driving the change, executive leadership was identified as both a contributing factor and a barrier to the adoption and use of offshore outsourcing. Because organisations such as PharmaCom are open systems that interact with their environment, the top management was able to identify and influence change, and the organisation was thus able to respond to environmental pressures and adopt strategies, including offshore outsourcing, which will enable it to become effective. The change literature is consistent on the importance of leadership to achieving change, and Nadler and Tushman (1990, p.77) describe the executive as 'a critical actor in the drama of organisational change'.

At the same time, some employees were concerned that leadership changes at the top can result in eroding executive sponsorship and support for the offshore initiative. This outcome supports the notion that leadership changes at the top tend to reduce the psychological investment in the previous strategy (Milliken and Lant, 1991) and new strategies may not always provide the visionary support necessary for the transition to the desired future state. Thus, without consistent executive sponsorship and support throughout the change process, 'the force of the old culture can neutralise and emasculate a proposed change' (Deal and Kennedy, 2000, p.158).

The lack of resources, both financial and human, was identified as a factor that strongly influenced the adoption and use of offshore outsourcing. There is general agreement that the case organisations faced shortages of internal staff to meet the rising demand from customers for more IT services and a corresponding lack of additional funding to meet the increased demand, and that offshore outsourcing allowed them to address both of these issues simultaneously. The senior managers were mainly interested in the financial savings and productivity gains resulting from the use of offshore delivery of IT services. However, the middle managers and non-managerial employees found the additional incentives associated with offshore outsourcing, such as access to new IT technologies, improved service quality, ability to fulfil customer demands, and fostering process discipline within the organisation, to be equally motivating. In addition, they found offshore outsourcing as enabling them to focus on high-value tasks such as improving their knowledge of the business and new IT-related technologies. The outcome here is consistent with the findings of Gibbert, Hoegl and Valikangas (2006, p.15), who have

suggested that resource constraints can fuel innovation by leading firms to entrepreneurial approaches to secure the missing funds or the required personnel.

6.2.2. Diagnosis and Planning

The case studies examined the three organisational factors most commonly identified as affecting the successful diagnosis and planning of the offshore initiative: i) the diagnosis of the need for change; ii) the strategy for change; and iii) the change implementation planning.

Diagnosing the need for change was identified as a key factor that either contributed to or prevented successful change management in the case organisations. In all but one case, the senior and middle managers generally did not seem to be concerned with inculcating a sense of urgency as part of the change process to alert and motivate the organisational members (especially the non-managerial employees) to the need for change. This difference might be explained by the fact that the members of the CMT seem to have underestimated the difficulty associated with driving employees out of their comfort zones. The CIO's message appears to move toward creating this sense of urgency, but falls short of doing so:

> Our exploration [of offshore outsourcing] will almost certainly reveal project and service areas in which it does not make sense to work with offshore companies. However, as a responsible IS organisation in challenging economic times, it is very important that we make a serious investigation of the potential to reduce our external spending. This is part of our long-term effort to ensure the continued success of [PharmaCom], our IS organisation and our own employees. (PharmaCom, 2003e)

Kotter (1998, p.5) describes that the purpose of this activity is to make the status quo seem more dangerous than launching into the unknown, and without a sense of urgency among those involved in the change, change efforts can slow down (Hayes, 2002).

Participants at different managerial levels in all but one case organisation considered developing a vision specifically for the offshore initiative, describing the future state of the organisation, as crucial to the success of the change effort. A vision that broadly focuses on achieving outcomes is seen as essential for not only directing the case organisations in the direction of the change, but also as a guide in determining the change management team's membership. The general consensus was that a vision for the offshore initiative was lacking. Without a sensible vision, Kotter (1998, p.9) states, a

transformation effort can easily dissolve into a list of confusing and incompatible projects, thus taking the organisation in the wrong direction or nowhere. A vision 'helps to create commitment, inspiration and motivation by connecting and aligning people intellectually and emotionally to the organisation' (Gill, 2003, p.312).

Data gathering and analysis were seen as contributing to both the development of the implementation strategy as well as to the implementation planning of the offshore initiative. Although there is no evidence that any of the diagnostic models were systematically used in the organisational diagnosis process, many employees felt that data gathering and analysis assisted the case organisations to shape the implementation strategy in terms of being able to arrive at decisions about what IT services would be outsourced versus those that would remain in-house (i.e. strategic *vs.* tactical), and to ensure that the vendors have the necessary organisational and technical processes in place to deliver the outsourced IT services. The middle managers and non-managerial employees mentioned that inaccurate diagnosis of the need for change would impose risks for the case organisations, such as creating dependence on offshore vendors for critical technical skills, cost increases, and project delays or failures. These findings support earlier research in two ways. First, they complement existing theory that diagnosing situations can provide a basis for developing action plans to achieve the desired change (Hayes, 2002). Second, they confirm the finding that (senior) managers responsible for implementing changes are selective in the way they use ideas and guidelines from extant diagnostic models (Woodward and Hendry, 2004).

The change implementation strategy was identified as a major factor affecting the successful management of change in all case organisations. The point was made that the strategy for change must provide a sense of direction and commitment for achieving the vision, clearly state the goals and objectives to be achieved by implementing the change, and clarify the involvement of different stakeholders in the change process. In general, the feeling that the current implementation strategy failed to factor in steps to involve the various stakeholders, especially the non-managerial employees, impacted by the change is implicit in the study participants' statements. This outcome supports the notion that senior managers subscribe to the idea of employee empowerment only in theory and prefer the command-and-control model that they seem to trust and know best (Dover, 2003). Gill (2003) maintains that strategies for change not only help with pursuing the mission and

vision, but effective strategy development takes into account the wisdom of people in the organisation.

Change implementation planning was considered a major factor contributing or preventing successful change management in all three cases. The role of the change management team in ensuring successful change management is recognised by employees of all managerial levels. The senior managers perceived the CMT's main role as providing leadership for the offshore initiative as well as resources (budget and staff) for implementation. The middle managers and non-managerial employees pointed out that, to be successful, the CMT's role should also include: establishing a clear strategy for the initiative; adopting a nimble management style; clearly communicating the change to various stakeholders; providing clear decisions regarding resources, activity scope and targets; and empowering the middle management.

In terms of the change management team's composition, documentary evidence suggests that the team in this case (i.e. CMT) is well constructed, with thought given to involving a broad range of individuals at several levels of the company hierarchy and across the different information systems departments. According to Kotter (1998), the change management team must be powerful in terms of titles, information and expertise, and reputations and relationships. A solid change management team is critical to successful change management and that appears to be the case at PharmaCom, with the exception of the inclusion of non-managerial employees in the process. It seems that the senior management disregarded the non-managerial employees' input in favour of the ease and efficiency associated with a top-down and more directive approach. The change management literature is unanimous in suggesting that, if employee involvement during change is encouraged, it increases commitment and performance, and reduces resistance to change (Chawla and Kelloway, 2004).

The failure to identify benefits and communicate how they will be delivered during the early part of the change process was mentioned as a factor that hindered successful implementation planning. The senior managers simply correlated benefit identification and delivery with the setting up of expectations of cost reduction from offshore outsourcing among internal customers and IT staff. The non-managerial employees and middle managers viewed the senior management's failure to clearly identify and communicate the value-added benefits of the offshore initiative, including cost savings, profitability, productivity gains, improved processes, and service quality, as a significant

barrier to successful change management. During post hoc discussions, the study participants revealed the negative consequences of not identifying the specific benefits prior to the launch of the change initiative:

> I believe that the cited benefits associated with this change were not properly identified, and the communication addressed the employees concerns very remotely. That probably contributed to some defensive attitudes.... (RNDMM3)

Similar findings have been reported in information systems research examining benefit justification in IT organisations. For example, Lin, Pervan and McDermid (2005) found in their study that the project justification process often failed to identify all available benefits for a project and the process itself placed more emphasis on getting project approval than on delivering proposed benefits.

Participants of all managerial levels agreed that stakeholder management was a critical factor in planning the change implementation. The non-managerial employees mentioned that the senior management had failed to secure the buy-in from internal business customers, which they feel will result in low customer adoption and satisfaction. In addition, they also felt that they had little say in how the offshore initiative was being implemented. James and Ward (2001) point out that past experiences have consistently shown that change initiatives are successful when key stakeholders in the organisation partake in the development of the vision, process and desired outcomes for the change.

Most participants viewed the allocation of resources, particularly internal staff, to manage the projects and services that are executed offshore as a critical factor in managing the change. It appears that adequate resources had been allocated to this effort in the case organisations, with the exception of one case, and there is general agreement that the senior managers had the primary responsibility for securing and allocating the necessary resources. The non-managerial employees particularly felt that, in the short term, the offshore initiative required more investment of human resources due to project/service complexity and overall difficulties associated with managing and coordinating activities remotely. Research suggests that senior managers need to be realistic about employees' attitudes towards resource adequacy and that resource scarcity may actually lead to better performance (Gibbert, Hoegl and Valikangas, 2006).

The importance of education and training to the successful management of change was identified as a factor in all cases. The senior managers generally acknowledged the role of

education and training in developing new organisational capabilities (knowledge, skills and attitudes) necessary to manage the change. They realise that, without training and education, the organisation will drift back to old ways of doing things. The non-managerial employees pointed out that it was not the lack of training, but the kind of training, that was at issue. They felt that training in cross-cultural communication skills is needed to enable them to effectively perform their new roles. A recent study on the leading and coping processes of change found that employees treat skills and competencies as a major personal resource and identified a number of skills and competencies (e.g. communicating with others, organising work and time management, assimilating and interpreting information, etc.) to be especially helpful in absorbing and coping with change (Woodward and Hendry, 2004). Kets De Vries and Balazs (1999) emphasise that, given the need for change, the executive leadership should determine along with senior managers whether a training-and-development programme is adequate to help employees acquire the necessary competencies, or whether the organisation should bring in outsiders with specialised expertise.

Participants at different managerial levels identified feedback mechanisms as a factor that contributed to the successful management of change in the case organisations studied. In all cases, feedback mechanisms are generally seen as essential to monitoring progress and to make continuous improvements to the offshore programme. In one case organisation, the participants perceived feedback processes as facilitating the resolution of day-to-day operational issues with vendors. This outcome seems to support the work of Taylor and Hirst (2001), who in studying the impact of change at the British mortgage company, found that feedback mechanisms such as quarterly surveys enabled the organisation to check staff satisfaction levels on a frequent basis and to identify and address issues early.

Vendor selection and sourcing was considered a key factor affecting the successful management of change in all the three cases. The general consensus of middle managers and non-managerial employees is that the senior management had rushed through the supplier selection process and had failed to develop trusted partnerships with suppliers selected for offshore outsourcing. The lack of a trusted partnership with the suppliers is seen as a significant barrier to the success of the offshore programme. Sood (2005) warns about the potential effect of incorrect choice of suppliers; that is, it could lead to project or service failure. Although trust with a supplier is developed over time and through experience, knowing which suppliers are well established in one's field often facilities

this process (Brown and Wilson, 2005). Quinn and Hilmer (1994) go even a step further by calling companies to develop sophisticated knowledge-based systems in order to capture and analyse essential details about suppliers' processes and capabilities.

The participants generally agreed that specifying performance measures, as part of the implementation plan, was a key factor in determining whether the offshore programme was producing the desired effect. The senior managers were mainly interested in using quantitative indicators such as cost savings to measure the overall outcomes of the offshore initiative. The middle managers and non-managerial employees, on the other hand, are interested in using both quantitative and qualitative indicators for ongoing programme monitoring as well as for gauging the effectiveness of the offshore initiative. The qualitative measures are viewed as particularly helpful in detecting and solving routine operational problems such as the quality of software code delivered by the vendor and levels of employee satisfaction. A similar distinction was made in a study by Dover (2003) in which 'hard' indicators of success were found to be useful in measuring business targets, whereas 'soft' indicators were appropriate for measuring cultural adjustments resulting from the change.

6.2.3. Implementation

The case studies examined seven factors that were most commonly identified as affecting implementation: i) communicating the vision for change; ii) change implementation approach; iii) management of the transition to the new state; iv) pilot projects; v) management of day-to-day operations; vi) management of employee resistance to the change; and vii) organisational culture.

In all three cases, participants considered the issue of communicating the vision for change as key. The senior managers acknowledged that clear and frequent communications with the employees is needed to steer the organisation in the direction of change, and it appears that a modest amount of communication about the offshore initiative had taken place in the case organisations. Despite the senior management's understanding of the importance of communication, employees in one case organisation felt that there is disconnect between them and the senior management, resulting from a lack of communication. The findings here support the notion that senior managers recognise that communication during change is important (Palmer, King and Kelleher,

2004). Researchers have suggested that communication in organisational change is linked to facilitating the vision, enhancing feedback, providing social support, and helping to modify change as it unfolds (Lewis, 2000).

The implementation approach was identified as a factor affecting the successful management of change in one case organisation. The middle managers commented that they did not consider themselves to be in positions of power to influence decisions regarding the offshore initiative. Further, the non-managerial employees, along with the middle managers, felt that the senior management's directive approach to the change did not allow for dialogue within the organisation and that their input was not valued in the planning and implementation process. For the senior management, the top-down approach to implementation appears to present 'the promise of producing rapid change toward an elegantly conceived end state that is symmetrical and complete' (Beer, Eisenstat and Spector, 1990, p.68). However, Gill (2003) cautions that such a purely rational and technical approach tends to lead to the false assumption that the organisation will naturally absorb the change. The outcome here seems to support earlier research findings that:

> In periods of organisational change, such as caused by contracting or outsourcing, employees may feel that their attachments to the organisation have waned. This is particularly true if the organisational change brings job insecurity because of layoffs. Even if only the potential for layoffs exists, it is still possible that the level of emotional attachment may reduce because of a perceived break of psychological contracts between employees and management, though normative and continuance commitments may be unchanged (Ugboro and Obeng, 2001, p.32).

On the other hand, Stacey (1992, p.175) summarises the problem associated with a purely bottom-up strategy to manage change:

> The whole point of flexible structures and dispersed power is to enable those below the top level in the management hierarchy to detect and take action to deal with a large number of changes affecting an organisation that operates in a turbulent environment. This is supposed to enable the organisation to learn about its environment and so adapt to that environment faster than its rivals do. However, studies have shown that widening participation and empowering people by no means guarantees that organisational learning will improve.

To be effective, change management experts have called for a blending of the top-down and bottom-up approaches:

> Today, corporate change is both top-down and bottom-up, with the widespread participation by members of the organisation recognised as indispensable. The change management process is driven by a vision of where the organisation needs to go in the future, and this vision is something that is co-created by the management of the organisation with people from all levels (Pitt, Murgolo-Poore and Dix, 2001, p.107).

The management of transition to the new state was mentioned as a factor critical to the successful of management of change. Participants, including the senior managers, of all case organisations generally agreed about the important role that communication tools played in overcoming language and distance barriers associated with transitioning IT operations or initiating new projects with the offshore vendors. The middle managers and non-managerial employees in most cases particularly felt that the transitioning of operational and project responsibilities and activities to the vendor was challenging and painful in the short term, and stated that the transition process required careful management in order to avoid interruptions to the business. They reported the following additional aspects, namely establishing work processes and procedures, planning knowledge transfer activities, documentation, and undertaking relationship building with the vendor through such activities as extended visits to the customer sites by vendor personnel, as greatly enabling the transition. Bridges (1980) maintains that many (senior) managers are wise about the mechanics of change, but are often unaware of the dynamics of transition. For organisations, the situational changes (e.g. new policy, structure, etc.) are not as difficult to achieve as the physiological transitions of employees, and unless managers handle the transition process successfully, all that careful decision making and detailed planning will matter little (Bridges, 1991).

The use of pilot projects to test alterative approaches to implementing the offshore initiative was seen as a contributing factor in two case organisations. Employees of all managerial levels viewed pilot projects as facilitating the assimilation of change by introducing the change gradually through small projects. There was general agreement that the senior management (i.e. members of the CMT) had the responsibility to identify projects that have the potential to succeed during the pilot phase. The findings here lend support to the notion that pilot projects assist in creating short-term wins which are critical to motivating employees during a long change effort (Kotter, 1998), and without

these short-term wins, employees may give up and default to their change resister status (Mento, *et al.*, 2002). McNish (2002) makes the observation that, early successes should be publicised and rewarded because they help reinforce the new and appropriate behaviours essential for the continued success of the change.

The management of IT operations was another frequently mentioned factor that contributed to successful change management in all case organisations. The middle managers and non-managerial employees pointed out that operational governance involved managing day-to-day tasks such as interfacing with the offshore vendor to review progress of projects or service delivery, problem resolution, issue escalation, risk management, resource allocation to tasks, review budget information related to projects or services, and finally, ensuring that the technical and business processes (e.g. quality standards, technical standards, regulatory requirements) were followed by the offshore personnel. They commented that communication constituted the single most important challenge in the management of operations and highlighted the importance of using various communication technologies, such as speakerphones, video conferencing, web conferencing, and collaborative digital workspaces (e.g. eRoom), as well as having a key vendor staff at the client site for coordinating project or service activities with the offshore personnel, to overcome this challenge. Participants in one case pointed out that the PMOs, as part of the formal governance structure, had a key role to play in facilitating operations by promoting best practices related to project management and execution. Current research on the role of governance in IT organisations suggests that, without formal governance, individual managers are left to resolve isolated issues as they arise, and such individual actions can often be at odds with each other (Weill and Ross, 2005). Horowitz (2006) reminds us that outsourcing failures are commonly caused by a fundamental lapse in managerial oversight and control, which in effect is a failure of governance, and that the most effective way to manage outsourcing risk, is by adopting a rigorous approach to governance.

In all three cases, the study participants considered management of resistance as a major factor in the successful management of change. Participants of all managerial levels perceived resistance to change, arising from employee fear and anxiety about job losses, as the biggest threat to the offshore initiative. In the short term, the participants felt that the changes resulting from the offshore initiative are likely to lead to employee discontent and mistrust and may even produce some employee backlash. Over the long term, they

felt that the changes could impact the organisation through a dependence on offshore resources, a drain of knowledge and skills, and a reduction in cost savings as a result of un-streamlined processes (i.e. these are processes which are able to handle a number of exceptions to the normal process). The study participants summarised the reality of resistance as follows, during post hoc discussions:

> The IT business had matured, and this market became very competitive. The resistance of the local/western workers was well motivated by their realisation of this inevitable situation. (RNDMM3)

There was general agreement that organisational acceptance of offshore outsourcing required time and a consideration of employee sensitivities, and that resistance could be minimised with communication and awareness-generation activities as well as through gaining the support of the project managers. The outcome here is consistent with theoretical postulations which suggest that resistance is inevitable when employees fear that they will lose something of value (e.g. job), when they hold misconceptions regarding the nature and implications of change, when communication is infrequent, or when employee participation is discouraged (Chawla and Kelloway, 2004). Kets De Vries and Balazs (1999) observe that the senior management can overcome resistance by preparing employees for the change, that is, by making them aware of the implications of not changing.

The participants in all case organisations considered the development of a fit between the change and the organisational culture an important factor in the successful management of change. Organisational culture here refers to the set of values (i.e. what is considered important in the organisation) that determine what the organisation stands for (i.e. identity) and how it does things (i.e. employee behaviour) (Hopkins, Hopkins and Mallette, 2005). There was general agreement that offshore outsourcing represented a paradigmatic shift for the case organisations and their customers, requiring employees to learn new behaviours. Participants mentioned that, in large corporations like PharmaCom which are generally resistant to cultural change, such significant changes are more likely to succeed if they were introduced in an incremental fashion. The non-managerial employees especially pointed out the role of top leadership in mitigating risks to the ongoing change initiative resulting from macro-level culture changes (such as those prompted by a merger or acquisition), while the middle managers emphasised the need to select vendors with similar organisational culture in order minimise risks to the change

initiative. Change management researchers such as Mento (*et al.*, 2002) report that, when a conflict arises between the existing culture and the change initiative, the potency of change can be destroyed by the culture. These authors suggest that any potential conflict must be identified during the diagnostic process and plans developed to anchor the change in the culture so as to increase the likelihood of success.

6.2.4. Institutionalisation

This study has found several effects related to offshore outsourcing in the information systems departments of PharmaCom. These effects are almost entirely based on the perception of the study participants, which have been verified by documents and observation where possible. The experiences at the three case organisations studied confirm previous findings.

The offshore initiative appears to have affected the job roles and organisational design in all case organisations and therefore the job satisfaction and motivation of employees. The senior management has set different expectations with regard to the performance of new work roles and responsibilities related to the offshore initiative. It expects that employees will re-school themselves and gain new skills to assume more business-oriented roles (as opposed to technology-oriented roles). The middle managers perceive themselves as encouraging the participation of non-managerial employees in the implementation of change and supporting them in assuming new roles which will aid this implementation process. Some non-managerial employees who are technically inclined seem to dislike the new roles because these roles tend to be non-technical and thus see them as hurting employee morale. Nevertheless, a majority of the non-managerial employees see themselves as increasingly having to play multiple roles in the change implementation, viz. organising offshore activities, managing vendor staff, monitoring quality and managing project or service delivery, and as supporting the middle managers in realising project or service objectives. In organisations undertaking major change, a change in job roles and responsibilities often leads to confusion and resistance. Change management researchers Woodward and Hendry (2004) comment that, with the change in job requirements, a concomitant change takes place in the working relationships because the individual employee is related to wider social groups in part-whole configuration. Although both of these issues (i.e. confusion and resistance) can be addressed with the help of a well-defined change strategy, these researchers suggest that employee

adaptation to these new roles will be ultimately influenced by assessments of management support, credibility and competence (Woodward and Hendry, 2004).

In most case organisations, the non-managerial employees claimed that there are no specific rewards or recognition programmes designed to influence the behaviour of employees in the direction of the change. They agree that rewards can positively impact the change by motivating individuals to adopt new behaviours necessary to assimilate the change. This finding supports Lawler's (1971) claim that organisations commonly achieve change in individual behaviour by modifying employee reward systems. From the perspective of Leonard, Scholl and Beauvais (1997), the motivational properties of reward systems are linked to the expectation that increased effort or the performance of new behaviours will lead to outcomes which have instrumental value to the individual. Allen and Montgomery (2001, p.158) suggest that, to institutionalise the changes, the organisation must align 'the organisational policies, procedures and reward system to perpetuate the new culture'.

The participants reported several benefits resulting from organisational learning, which they felt helped to detect and correct errors in organisational functioning during times of change. Organisational learning entails improving the collective ability of the organisation to act more effectively and it occurs when individual organisational members engage in sharing 'the meaning they have constructed for themselves as they encountered new experiences and ideas' (Hayes, 2002, p.43). For the non-managerial employees, the opportunity to apply lessons learned from previous change management experiences to the present offshore initiative as well as the ability to develop lessons learned from the current experience represented incremental steps to improve change management efforts. The middle managers mentioned that collective learning efforts assisted them in the overall management of risks related to offshore outsourcing and, in particular, those risks that result from cultural differences between the vendor and PharmaCom. To the senior managers, collective learning gave the organisations the ability to redesign underlying processes to improve efficiencies of business operations in the midterm so that the intended cost benefits can be obtained. The findings here support earlier research on leading change in multinational organisations which found that, in project teams with cross-functional, cultural and geographic boundaries, there are additional complexities which need to be anticipated and proactively managed (James and Ward, 2001). The study suggests that, in global organisations that are undergoing

transformation, 'it is essential to have cross-boundary support to accelerate learning and drive change' (James and Ward, 2001, p.149).

Participants at different managerial levels generally agreed that the information systems departments' ability to sustain the change hinges on how well the offshore outsourcing process is integrated into the organisational culture of the company. They mentioned that costs savings and project deliverables are good indicators of the extent to which this process is integrated into the business and IT practices of the organisation. For some participants, even after this offshore process is fully integrated, constant review of performance is needed to determine if some of the functions or projects can be better done internally than offshore. The non-managerial employees specifically reported that, at the individual project or service level, initial handholding by project managers assists in easing the concerns and fears of internal customers and internal staff members involved in the offshored projects. Participants in most case organisations agreed that delivering results during times of change helped to bring focus in an uncertain environment. The outcome here is consistent with Kotter's (1998, p.18) suggestion that the first step in institutionalising change successfully in a corporate culture is by 'a conscious attempt to show people how the new approaches, behaviours, and attitudes have helped improve performance'.

The senior managers and non-managerial employees indicated that the IT organisation's leadership plays a critical role in sustaining the momentum for change by: being supportive, actively participating in the change, providing resources, removing roadblocks, communicating, and managing risks. This outcome reinforces Kotter's (1998) notion that it is important to develop the means to ensure leadership development and succession to anchor the change.

6.3. EMERGING MODEL OF MANAGING CHANGE RELATED TO OFFSHORE IT OUTSOURCING

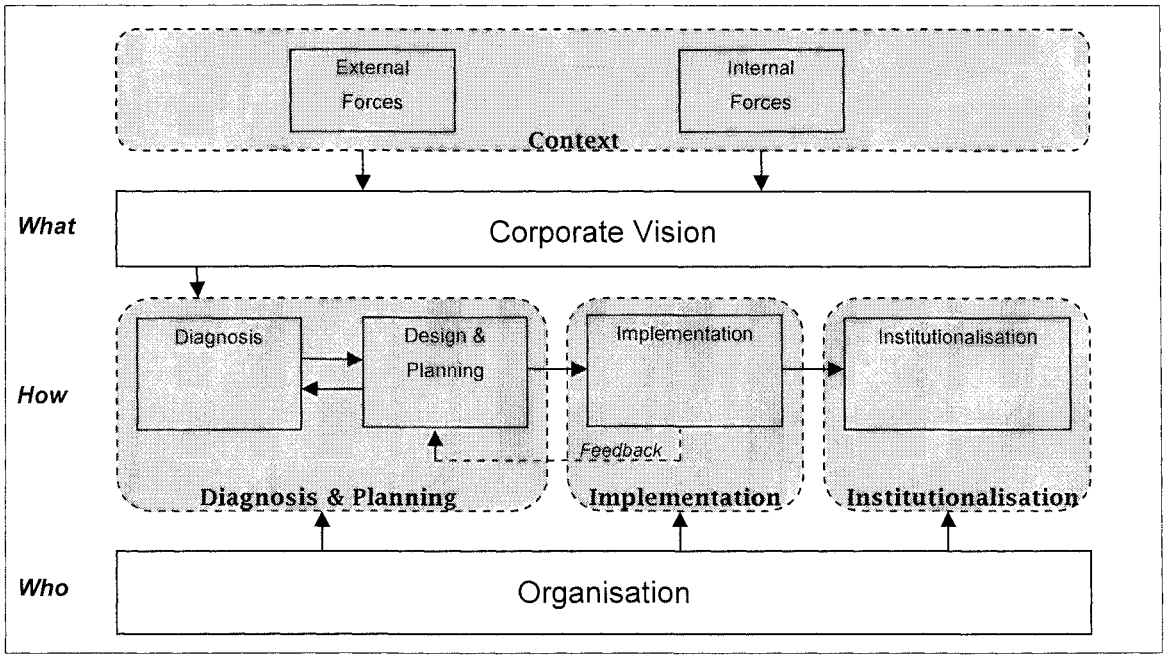
In addressing the latter part of the main research question, i.e. what lessons can be learned from these experiences of managing change, this study offers a model as a way of conceptualising the change process associated with the implementation of offshore IT outsourcing. This model of offshore IT outsourcing implementation seeks to illustrate the links between the contextual conditions and the change process, and identifies the key organisational factors that influence change outcomes in offshore outsourcing efforts. There are a number of interesting features to this model, which are described below.

6.3.1. Development of a Model of Offshore IT Outsourcing Implementation

The analysis of the case studies reveals that the process by which IT organisations manage change with respect to offshore outsourcing is complex and involves the interplay of various factors. The proposed model, as shown in Figure 12, represents what the employees and management perceived concerning how the change related to offshore IT outsourcing was implemented and managed. The thinking behind the development of this model is underpinned by references to the literature in Chapter 3, particularly Section 3.5.

The conceptual model of offshore IT outsourcing implementation suggested by this research has strong similarities to the generic process model of change shown in Figure 1. The major difference between the generic process model and the proposed conceptual model is the emphasis on corporate vision and organisation in the proposed model. These two features, which are explored and delineated below, are demonstrated to be significant to the capacity of the organisation to manage change related to offshore IT outsourcing.

Figure 12. Conceptual model of offshore IT outsourcing implementation



Corporate vision, which indicates *what* goals will be accomplished by the change, appeared to be a key feature of the proposed model because it allowed PharmaCom to adapt to dramatic changes in contextual conditions. As has been suggested in the change literature, a vision not only provides the basis for empowering and encouraging leaders and followers to implement the change (Sullivan and Harper 1996), but also connects the organisation with its environment. Building on this base, this study illustrates that realising the value of offshore IT outsourcing hinges on a clear corporate vision that aligns the offshore IT outsourcing strategy with business objectives. Therefore, the challenge for organisations, particularly for those seeking to gain competitive advantage through offshore IT outsourcing, is to develop a well-defined outsourcing strategy that aligns the actions of individual organisational members, teams and business units to achieve the corporate objectives with respect to offshore outsourcing. An effective outsourcing strategy, however, requires organisations to first create an outsourcing strategy framework that is aligned with the business strategy (NeoIT, 2006b). The key elements of this framework include: a corporate strategy for offshore IT outsourcing; control mechanisms; quality control procedures; risk management plans; industry comparisons; alignment with organisational culture; and cost-saving objectives (NeoIT, 2006b).

The second feature of the proposed model is the alignment of the organisation with the corporate vision, reflecting *who* will carry out the change plan. In developing the corporate vision, the executives of PharmaCom not only provided the roadmap for a desired future state, but also leveraged the vision as a tool to align the organisation with corporate goals. The vision-organisation alignment is characterised as the state where employees work in collaboration to: agree on the current state assessment and the plan to achieve the future state, and implement the plan to reach the desired state of the organisation. This alignment is displayed by a shared understanding, common orientation, common values, and shared priorities (Gill, 2003). The degree to which employees are willing to cooperate during an organisational change, therefore, depends on how aligned they are with the vision. Previous research work on outsourcing has shown that aligning IT outsourcing plans with corporate strategic plans is an important factor in outsourcing decisions (Straub, Weill and Stewart, 1998). This research demonstrates that, without a compelling vision, it would be difficult to secure the commitment of people and encourage them to cooperate in the change effort.

The current study highlights that the internal and external context of the organisation, as well as a host of organisational factors, in combination, can influence change outcomes in offshore IT outsourcing initiatives. The data suggest that the change process components, viz. context, diagnosis and planning, implementation and institutionalisation, are interlinked, and that these components together helped to shape the implementation of offshore IT outsourcing programmes in the different information systems departments of PharmaCom. In the proposed model, these change process components permit the inclusion of both contextual and organisational factors that may influence the change. This is consistent with research which suggests that organisations must conceptualise the influence of context in terms of configurations of factors or variables (Dopson and Fitzgerald, 2005). Further explanations of the four change process components, or in other words *how* PharmaCom planned to reach its goals related to offshore IT outsourcing, are provided in the paragraphs below.

6.3.2. Context

The data suggest that the adoption of offshore IT outsourcing at PharmaCom was influenced by a variety of factors external as well as internal to the organisation. Externally, the complex of economic forces that govern the drug innovation process,

including increasing costs of drug development, declining R&D productivity, greater competition and shorter product life cycles, was perceived by the participants to be the key catalyst for adopting offshore IT outsourcing in the company. At the same time, the current regulatory environment was viewed by some participants as not conducive to offshore IT outsourcing due to fear of losing control over remote activities. A recent industry study confirms this finding and suggests that the political and legal framework is preventing the pharmaceutical sector from taking some of the risks needed to discover new and innovative drugs (PriceWaterhouseCoopers, 2007).

Although the document analysis suggests that latest advances made in biotechnology and information technology have enabled pharmaceutical companies such as PharmaCom to accelerate the drug-discovery process and have expanded the opportunities for new-drug discovery through external collaboration with biotechnology firms, recent public concerns about escalating drug prices and rising health care spending have generated considerable interest and debate on how new drugs are discovered, tested and sold (United States Congressional Budget Office, 2006). These concerns appear to have prompted the pharmaceutical company executives, including PharmaCom's, to pursue novel solutions such as offshore IT outsourcing and the outsourcing of clinical trials to developing countries to reduce drug development costs and improve R&D performance.

PharmaCom's decision to adopt offshore IT outsourcing emphasises the importance of external forces in stimulating organisational change and it reiterates our current understanding from literature that organisations scan the environment in order to understand the external forces of change so that they can develop effective responses which secure or improve their position in the future (Choo, 1999). Environmental scanning here not only involves gathering and analysing information about competitors, suppliers and customers, but also covers technology and changing economic, social and political conditions.

Internally, the top executives of PharmaCom appear to have recognised the implications of these external threats for the competitiveness and long-term survival of the company and responded by developing a desire for change. The data suggest that the pressure to satisfy the complex and expensive demands of a technology-driven drug innovation process while maintaining profit and growth scenarios, led these executives to launch cost rationalisation initiatives, which included the adoption of a focused offshore IT outsourcing strategy. These data reconfirm and strengthen the previously expressed view

that when organisational performance is critically influenced by the context within which they occur, it demands that the organisation's leadership not only fully understand the changing environment, but also requires them to understand when to introduce organisational changes in order to adapt to changes in the environment (Tushman and Anderson, 1986).

The offshore IT outsourcing strategy was perceived by the study participants as key to meeting the demands of increased productivity and business performance through the creation of additional capacity for work in PharmaCom's IT organisation by combining internal and offshore vendor resources. Moreover, this strategy was seen as offering the IT organisation the flexibility to redirect its internal resources to focus on its strategic tasks, thus ensuring the optimum utilisation of the organisation's available resources. The data from this study reinforce the understanding that the capability to identify, acquire, develop and deploy both internal and offshore human resources is critical to achieving an organisation's outsourcing goals (Ranganathan and Balaji, 2007).

The conceptualisation of organisational change proposed by this study is consistent with the notion of the processual theory of change that was discussed earlier. The processual approach maintains that when the organisation's external context changes, its internal context must also respond concurrently (Lau, 1999). These contextual factors, along with temporal connections between future expectations, present events and historical accounts, interact jointly to produce organisational change (Nelson, 2005).

6.3.3. Diagnosis and Planning

The analysis based on corporate documents suggests that the executive team of PharmaCom worked to articulate the desired future state of the organisation through a corporate vision and created an organisational climate in which the employees understood why the change was occurring. This is consistent with prior research which suggests that, to actively change an organisation, leaders must make decisions regarding the nature of the desired state, or in other words, create a vision (Manasse, 1986).

To initiate the change process, the PharmaCom executives worked with those senior managers of the different business units and functions that they believed had the competencies and motivation to spearhead the various change initiatives including the offshore IT outsourcing effort. In the IT organisation, these senior managers, acting as

change managers, undertook a diagnostic process to gather and analyse information in order to assess the present state of organisational functioning and determine its future state of organisational performance. Although it appears that these change managers did not use any organisational models during the diagnosis phase, they did consult internal and external outsourcing experts as part of the diagnostic process (through workshops) to identify opportunities and risks related to offshore IT outsourcing. The data reconfirm earlier observations that offshore outsourcing can pose major risks for an outsourcing firm, and therefore outsourcing decisions must be based on an in-depth analysis of opportunities and the following risks: changing the boundary of the organisation, uncertainties concerning vendor performance, opportunistic bargaining and decisions by vendor, loss of competencies to the vendor, and loss of control over important value chain activities (Ngwenyama and Bryson, 1999).

With the corporate vision driving the offshore initiative, the change managers in the IT organisation did not perceive a need to develop a separate vision for the offshore initiative but to think through and envision the probable impact of the initiative. From the data it appears that upon completion of the diagnosis activity and issues identification, the IT organisation's change managers moved to the design and planning phase in the proposed model to develop and agree on the change strategy and plan. This phase broadly consisted of: i) enumerating the sourcing objectives with time and cost milestones; ii) determining the scope of the IT activities that would be offshore outsourced and their geographic destination; iii) identifying the operating model and evaluating potential vendors against the specific sourcing needs; and iv) final vendor selection and contract design and negotiations. During this process, the change managers returned to the diagnostic phase (indicated by the reverse arrow in the model) as needed to ensure alignment with the corporate vision. In addition, the model suggests that change managers used feedback from the initial stages of the implementation phase to make corrective adjustments to the change strategy and plans. Repenning and Sterman (2001) argue that the ability of managers to identify and learn new improvement methods is no longer a significant concern, but implementing them successfully presents the biggest challenge.

Successful diagnosis and planning of offshore IT outsourcing initiatives requires organisations to embrace a systems perspective. A systemic approach to building offshore capabilities involves a number of processes and routines, such as opportunity recognition, goal setting, generating stakeholder buy-in, and providing an overall direction for

offshore efforts (Ranganathan and Balaji, 2007). Such an approach to offshore IT outsourcing, argue these authors, not only enables organisations to explore the connections between IT and business strategies, but also allows them to formulate an appropriate sourcing response.

6.3.4. Implementation

The data suggest that the change managers began the implementation phase in the proposed model with communicating the change strategy and plans to the employees in an effort to prepare them for the change. Despite their attempts to communicate the strategy and plans, the middle managers and non-managerial employees perceived that a vision focusing on the desired longer-term outcomes was lacking for the offshore IT outsourcing initiative to succeed. The literature also supports this notion that a longer-term perspective not only enables the change leadership to consider the discontinuities rather than generate incremental changes (Gratton, 1996), but also helps to avoid long learning curves and to minimise redundant efforts in the development of high-quality IT services (Pai, 2007).

There is evidence to suggest that the implementation of offshore outsourcing in the IT organisation followed a top-down approach, with key decisions made by the senior management at the exclusion of middle managers, non-managerial employees and other stakeholders. The top-down approach seems to have led the different employee groups into a period of fear and uncertainty over the change that was taking place. Further, the lack of adequate communication and involvement of employees in the planning and design process contributed to the resistance to offshore outsourcing at the middle management and non-managerial employee levels. This resistance served to advance the notion among senior managers that while they may understand the strategic value that offshore IT outsourcing brings to the businesses, middle management and non-managerial employees often may not fully comprehend the reasons and benefits associated with this change. Prior research has shown that employee involvement and participation early in the outsourcing process is needed to bring about the change to the cognitive processes of organisational members (McIvor and McHugh, 2000). Moreover, especially in those organisations that are operating in a turbulent environment, outsourcing projects must

consider employing an iterative and interactive process in which the involvement of employees, customers and suppliers in developing the approach to change is encouraged by the executives (Nordin, 2006).

The study participants perceived cross-cultural and time-zone differences between the vendor and client as constituting a major risk during the implementation of offshore IT outsourcing efforts. Differences arising from language, working methods, ways of communication, organisational culture, and policies and procedures were all perceived as potentially leading to misunderstandings that could result in extensive re-work and delays. According to a recent study on offshore IT outsourcing, there are additional risks that arise from communication failures between the client and vendor (Sharma, Apoorva, Madireddy and Jain, 2008). These risks are exacerbated when organisations consider outsourcing to multiple geographies (NeoIT, 2006b). The interview data from this study suggest that mutual site visits by both vendor and client staff during the offshore engagement play a critical role in bridging cultural and communication gaps. Similarly, learning about the cultural and work-related characteristics of the country to which the work is outsourced can also help organisations to devise strategies to minimise the negative effects of culture risk (Sood, 2005). Finally, by seeking vendors with similar organisational cultures and values, organisations may be able to facilitate the establishment of 'common interest' and 'mutual understanding' to make the outsourcing relationship a success (Sharma, Apoorva, Madireddy and Jain, 2008, p.63).

According to the interview data, the participants perceived knowledge transfer processes between the outsourcing organisation and vendor as playing a key role in the successful transition to the new organisational state. Knowledge transfer, which involves an external process between the service recipient and provider concerning specifications of the required services, is believed to be impacted by cultural risks as well as language and communication risks (Beulen, Van Fenema and Currie, 2005). To mitigate these risks, the outsourcing literature recommends a clear transition period, with provisions for the key offshore staff to be present on the client site for a period of time so that they can be trained in the systems, business processes, organisational procedures, etc. (Sparrow, 2005).

It is clear from the data that offshore IT outsourcing implementation disrupts many aspects of organisational functioning, including business continuity, current working methods, and social relationships. Change leaders often underestimate the effect of these

factors on the overall organisation and its employees when managing change. By maintaining a two-way communication with the employees and by involving them early in the change process, change leaders may be able to guide the implementation more effectively. As Duck (1993) notes, managing the conversation between people leading the change effort and those who are expected to implement the new strategies is one of the most important aspects of managing change.

6.3.5. Institutionalisation

In the institutionalisation phase of the proposed model, the data suggest that the change managers monitored outcomes to assess whether the change was producing the desired effect and to confirm that the new practices were embedded in the IT organisation's operating routine.

It is interesting to note that, according to the interview data, there was a perceptual gap between the senior management and employees regarding the new job roles and responsibilities associated with offshore IT outsourcing. The senior managers interviewed expected the employees to assume new roles and responsibilities that were focused on the strategic aspects of the change. On the other hand, the middle managers and non-managerial employees interviewed appear to have been focused on the day-to-day operations of offshore IT outsourcing implementation without a clear understanding of what the new job roles and responsibilities were and how they were to be performed. The outsourcing literature suggests that senior management may be able to address this gap by clearly identifying the new roles needed such as relationship management, contract management, change control, contract administration, etc. prior to the outsourcing engagement, and retraining the internal staff in these new job roles (Sparrow, 2005).

The interview data helps to strengthen the notion that successful institutionalisation of change is contingent on the implementation of reward and recognition programmes. The employees perceived that a system of recognising people who contribute to the success of offshore efforts and a reward system to appreciate their contribution was needed in order to motivate people to change work practices and key behaviours. The data appears to be consistent with suggestion in the literature that the effective use of performance incentives and penalties is an important factor affecting outsourcing in successful organisations (Khong, 2005).

It is evident from the interview data that the employees, especially those at the non-managerial level, appear to understand organisational learning to involve the application of lessons learned from past change experiences and integrating that learning into the current offshore IT outsourcing efforts. With the organisational learning literature pointing out that organisational learning is embedded in social and cultural contexts (Lave and Wegner, 1991), applying lessons learned (either positive or negative) from one context to another could lead to potential problems because of the differences in contexts. In such situations, an organisation may be able to improve its ability to effectively transfer its best practices by putting in place lessons learned systems that are specifically designed to capture and disseminate knowledge for a particular domain or specialty such as offshore outsourcing (Snider, Barrett and Tenkasi, 2002).

Finally, sustaining the change is perceived by the study participants as being impacted directly by PhamaCom's ability to integrate offshore IT outsourcing into the organisation's culture. The literature points out that while many organisations are able to accomplish the short-term objectives associated with change programmes, they often fail when it comes to establishing an underlying capability to sustain improvements from the change (Beer and Eisenstat, 1996). Recent research by Repenning and Sterman (2001) suggests that sustaining organisational change requires a shift in the mental models of those leading and participating in the change.

6.3.6. Conclusion

The conceptual model proposed by this study not only attempts to explain the influence of external and internal context on the adoption and implementation of offshore IT outsourcing, but also provides evidence to support the relationship between context and action. The analysis highlights that offshore IT outsourcing brings about deep-seated organisational changes which require change managers to address various organisational factors throughout the change process. To deal effectively with this change, organisations must anticipate the discontinuity that it introduces into the organisational structure, workforce, focus, and mission (NeoIT, 2005b).

6.4. SUMMARY

The cross-case analysis reported in this chapter is built upon the four change process components found in the three case studies. Although these change components appear to be simple and evident, they are in fact very complex. Each component categorised separate factors influencing change management and was described and analysed in detail with reference to existing literature. The findings with regard to these components focused on: i) contextual factors driving the change; ii) organisational factors contributing to or preventing successful change management; and iii) effects of change on the company's information systems departments. In light of these findings, a conceptual model was presented, which provides a useful basis for understanding and interpreting the change process with respect to offshore outsourcing in IT organisations. In the next chapter, the implications of the findings for change management practice and further research are discussed.

7. CONCLUSIONS AND RECOMMENDATIONS

7.1. SUMMARY OF THE STUDY

This study set out to investigate the nature and process of organisational change associated with the implementation of offshore outsourcing in IT organisations. The literature review indicated that prescriptive approaches to understanding change in organisations tend to oversimplify complex issues and to ignore important historical and contextual factors that influence change. By adopting a processual view, this study was able to examine the influence of the company's history and internal and external environments on the events and activities related to offshore IT outsourcing as they unfolded over time.

This research has shown that the case study strategy can be used reliably to understand situations where contextual conditions strongly influence the events being studied and where the researcher cannot control the course of events as they unfold. Using multiple data sources, the study collected information on the contextual factors driving the change, organisational factors affecting the successful management of change, and the effects of change on the organisation. The within-case analysis provided rich descriptions and interpretations of the change phenomenon related to offshore IT outsourcing, while the cross-case analysis revealed similarities and differences between the cases which will inform future change management efforts.

7.2. CONCLUSIONS

This section presents the conclusions of this study within the framework of its major objectives. The reader is cautioned against generalising the findings, which represent results only from one company, to the entire pharmaceutical industry. However, this should not lessen the importance of the issues and insights that emerged from this study.

7.2.1. Objective 1: Contextual Pressures Driving the Change

This study concludes that a confluence of external and internal contextual pressures for change created an environment receptive to the adoption and use of offshore outsourcing at PharmaCom. The external context, particularly the economic forces, was found to be

influential in promoting change initiatives such as offshore IT outsourcing in cost-oriented organisations. Recent research, however, indicates that the strength of cost pressures can vary by the sector and can depend on the competitive intensity of the sector (Farrel, Laboissiere and Rosenfeld, 2006). The data suggest that the R&D productivity crisis is a necessary condition for companies in the pharmaceutical industry to adopt strategies, such as offshore IT outsourcing, to reduce drug development costs and to improve R&D productivity. Regulatory concerns remain an important challenge to the adoption of offshore IT outsourcing in the pharmaceutical industry, a fact confirmed by Farrel, Laboissiere and Rosenfeld (2006). New technologies have become a significant source of competitive advantage in the pharmaceutical industry by accelerating drug discovery and development, supporting the notion that businesses have come to increasingly rely on IT to achieve and maintain sustainable competitive advantage (McNish, 2002). Investment in information technologies, in particular, increase business efficiencies, while offshore outsourcing of IT services is instrumental in deriving maximum value from these investments.

Within the context of a changing external environment, the internal context further explains the rationale for the adoption of offshore IT outsourcing at PharmaCom. The role of the executive leadership was central to this adoption. Examination of the organisation's internal environment by the top leadership appears to have led to the introduction of strategies aimed at gaining competitive advantage. The top leadership's awareness of the need to continually scan the environment (Correia and Wilson, 1997) is crucial for organisational survival. Resource consideration, notably the lack of human and financial resources, was a dominant factor influencing the adoption and use of offshore IT outsourcing within PharmaCom. The shortage of internal IT staff to satisfy the growing demand for IT services, coupled with budget constraints, provide an important incentive to support the adoption of offshore outsourcing. Lack of internal resources was identified as a dominant factor in all three cases, validating the suggestion by Farrel, Laboissiere and Rosenfeld (2006, p.26) that it is the 'scarcity of local talent that prompted companies in the U.S. and Germany to hire offshore at the end of the last decade'. A proper understanding of the organisation's internal environment (e.g. resource constraints) is thus necessary for leaders so that they can take into consideration these internal variables while planning a change initiative. This aspect is noteworthy in this study, since in much of the change literature the focus is on external factors.

7.2.2. Objective 2: Organisational Factors affecting Change Management

Based on the analysis of the three information systems departments at PharmaCom, this study concludes that several organisational factors in combination are necessary for successful management of change with respect to offshore outsourcing in IT organisations. The study found that factors including data gathering and analysis, change management team, resource allocation, feedback mechanisms, and performance measurement contributed to the successful management of change. Similarly, factors such as the lack of a sense of urgency, the lack of a vision, the failure to clearly identify the benefits of the change, lack of education and training in cross-cultural communication, and poorly designed vendor selection process hindered successful change management. Research suggests that organisations which are successful in outsourcing exhibit common features: they have done adequate research and planning, developed clear goals and objectives, involved the right people to manage the effort, selected the right outsourcing partner, emphasised short- and long-term benefits, developed performance criteria, established feedback and control mechanisms, and provided adequate training, infrastructure and facilities (Khong, 2005).

With the implementation of change, various organisational factors including transition management, pilot projects and management of IT operations contribute to successful implementation. On the other hand, failure to effectively communicate the vision, the directive (top-down) implementation approach, the lack of strategies to manage employee resistance, and the lack of plans to develop a fit between the change and the organisational culture appear to present significant barriers to change implementation. This is consistent with Khong's (2005) research which found the following organisational factors as contributing to unsuccessful outsourcing: unclear objectives, inadequate and sketchy plans, poor choices of outsourcing partners, inadequate skills and lack of infrastructure, poor organisational communication, lack of involvement of the top management, employees' fear of job losses and change, decline in morale and performance of remaining staff, and lack of flexibility.

The successful introduction of offshore IT outsourcing within an organisation and the smooth transition to the desired future state therefore depends on the change strategy

adequately addressing all of these organisational factors. Taking these factors into account during the planning phase helps to minimise employee resistance to change and contributes to successful outcomes.

7.2.3. Objective 3: Effects of Change

The main effects of the offshore initiative include: performance of multiple roles by employees in change implementation and management expectations of these roles, as well as benefits of collective learning that help to take corrective actions to achieve the desired state. Rewards are particularly viewed as critical for adopting new behaviours related to the change. Demonstration of positive results during the course of the change process and ensuring leadership support is linked with helping to institutionalise the change.

Previous research has shown that employee morale and commitment are important to the success of outsourcing efforts (Embleton and Wright, 1998; Elmuti and Kathawala, 2000). Management must make every effort to maintain high employee morale during outsourcing, including treating employees appropriately by providing adequate support and reasonable remuneration deals (Khong, 2005).

7.2.4. Objective 4: Contribution to Change Management Practice

The research findings highlight the importance of properly managing change with respect to offshore outsourcing of IT services in order to achieve positive organisational outcomes. The issues raised in this study have implications for both policy makers as well as change managers. Many of the recommendations set out below have already been well attested by the change management experiences of organisations in a number of industries. For example, in studying the implementation of a new performance management system in the construction industry, Cheng, Dainty and Moore (2007) established that senior management commitment and leadership, appropriate training and education and careful monitoring of the implementation process are all key factors underlying success in any change initiative. Similarly, Goodman and Truss (2004) demonstrated the importance of communication strategies when implementing change initiatives through their study of a public sector, non-profit organisation and an oil company.

The conceptual model of offshore IT outsourcing implementation proposed by this research not only identifies the change process elements that are demonstrated to be significant to the management of change related to offshore IT outsourcing, but may also offer an alternative method of conceptualising and operationalising future offshoring initiatives.

7.2.4.1. Recommendations for Policy Makers

Top executives of both U.S. and multinational companies are increasingly utilising offshore IT outsourcing as a strategy for achieving cost efficiencies and other corporate objectives. However, realising the full potential of offshore IT outsourcing as a strategic tool for securing these objectives requires actions on a number of fronts listed below.

1) Building commitment to change. Building commitment is an important part of any change initiative and most organisations undertaking a major change such as offshore IT outsourcing often fail to take the necessary steps to generate commitment within the organisation. It starts with communication from the executive leadership explaining the need for change and the communication must aim to sensitise employees and other stakeholders to the contextual factors, both internal and external, that have led to the consideration of the change. The employees and other stakeholders must understand why the organisation is embracing offshore IT outsourcing and how the change will affect them. When they understand that offshore IT outsourcing is driven by legitimate business drivers, they are more likely to accept it. Without a clear understanding of these business drivers, they may come to view the change as unjustified and burdensome, thus increasing the likelihood of resistance to offshore outsourcing initiatives. The top leadership will need to develop an effective communication strategy to address the concerns of the employees and other stakeholders, without which these concerns can lead to change resistance that can adversely impact the organisation and the offshoring efforts (NeoIT, 2005b).

2) Aligning outsourcing objectives with the corporate vision. Successful offshore IT outsourcing depends on having a clear corporate vision that aligns offshore outsourcing with business objectives and a demonstration of conviction by executives that offshore IT outsourcing will help in realising the corporate vision. Aligning the outsourcing strategy with business objectives can provide several potential benefits to a business, including

more competitively priced products and services, greater return-on-investment, increased profit margins, growth, etc. However, aligning outsourcing objectives with the corporate vision does not itself guarantee that workers will embrace offshore IT outsourcing, especially if jobs will be displaced due to offshoring. Employees are less likely to resist the change when they see offshore IT outsourcing as improving the long-term viability of the company through increased profits and business growth. On the other hand, if they determine that offshore IT outsourcing is being pursued only to meet short-term cost reduction goals, including layoffs, they may resist the change.

3) Change management team. It is imperative for top-level executives to recognise that having an effective change management team (or change agents) is a critical success factor in implementing offshore IT outsourcing programmes. This team must be powerful in terms of titles, information, expertise, reputations and relationships (Kotter, 1998) to be able to remove obstacles to the change and deliver on the change outcomes. More importantly, the individual team members must possess credibility as leaders and be free of self-interest and hidden agendas so that they can win the trust of the employees and other stakeholders. Top executives often fail to take into consideration the sometimes differing self-interests and agendas of these change agents and how those differences might impact support of the new directions, which frequently results in sabotaged change efforts (Marshak, 2006). Also, the change management team's membership must be representative of the different departments and units impacted by offshore IT outsourcing, and individual team members will require change management competence to deliver the results for which they are accountable.

4) Executive sponsorship. Top executives can play a crucial role in successful change management by actively participating throughout the change management process. Through the sponsorship of specific projects or initiatives, these executives can not only demonstrate their commitment to the change, but can also show that the proposed change aligns with the business objectives. Getting the projects or initiatives incorporated into the sponsors' objectives gives them the incentive to make change the work (Dobson, 2001).

7.2.4.2. Recommendations for Change Managers

Change managers play an important role in influencing change outcomes with respect to offshore IT outsourcing and the following recommendations are intended to promote effective change management:

1) Vision for change. Offshore IT outsourcing, as with any major change, requires the development of a clear vision that describes a 'big picture' of the desired future state. The commitment of the change managers (assuming that the change managers are responsible for initiating the change) must flow from the clarity of the vision and it must percolate down the organisation creating buy-in at all levels. A good vision is imaginable, desirable, feasible, focused, flexible, and communicable (Kotter, 1995), and the following questions can guide the development of such a vision for offshore IT outsourcing:

- What services or products will the change initiative provide?
- What benefits and competitive advantages are likely to result from the change initiative?
- As a result of implementing the change, what future state of the organisation is envisioned?

Finally, the change managers must translate the change vision to the external service providers in terms of change implementation strategy and performance goals and measures, which must be clearly understood and agreed upon by the service providers.

2) Communicating the vision for change. The importance of communicating a vision during a significant change effort such as offshore IT outsourcing cannot be overstated. Pitt, Murgolo-Poore and Dix (2001) found that a vision-driven change requires extensive and creative use of communication strategies. In communicating the vision, the change managers (assuming that the change managers are responsible for initiating the change) not only establish credibility with employees, but also minimise employee resistance to the change, which often stems from fear and uncertainty. To be successful, the communication plan must focus on developing tailored communication streams that aim to address key challenges, managing resistance, and achieving buy-in from stakeholders (NeoIT, 2005b).

3) Sense of urgency. Change mangers can set the stage for offshore IT outsourcing by instilling a sense of urgency within the organisation. A 'burning platform' (Kotter, 1996) is essential to alert and motivate the organisational members to the need for change and gain their cooperation to bring about the change.

4) Communication plan. A vital element in motivating people to change is the effective communication between the change managers and the stakeholders impacted by the change. Lack of and insufficient communication is one of the main reasons why change efforts fail. Goodman and Truss (2004) indicate that selecting the appropriate method for communication and deciding on the content of the communication are extremely important. Change managers can use a formal communication plan to motivate different stakeholders and build commitment to offshore IT outsourcing initiatives, and the focus of the plan should be on promoting the change by highlighting its benefits. They must engage the different stakeholders in an open dialogue about the change and allow them to state their views and to provide feedback into the change process. Frequent communications are important during the planning and implementation stages, as this helps to alleviate employee fears and begins to build support for the change. Change managers can utilise existing and regular forms of communication such as newsletters, web sites, meetings, etc to get the message out.

5) Change implementation strategy. A change strategy is a critical component of any offshore IT outsourcing initiative. 'Without strategies for change, vision is a dream' (Gill, 2003, p.314). To develop an effective strategy, change managers must determine the long term goals and objectives of the offshore IT outsourcing effort and address the following questions:

- Which business processes will be outsourced?
- How long they will be outsourced?
- Which geographical location(s) should be selected?
- What offshore service delivery model should be used?
- What risks need to be mitigated?
- What are the short and long-term costs?

- What criteria should be considered in selecting suppliers?
- What skills and talents will be needed for the implementation?

By encouraging the involvement of the middle management and non-managerial level employees in the strategy development process, their buy-in can be created from the very start.

6) Teamwork. In order to create buy-in from the employees early in the change process, the change management team should consider creating and leading cross-functional working groups, comprised of middle management and non-management level employees, to work on aspects of design and planning (tasks could include data gathering and analysis, developing new work processes, developing performance measures, etc.). In so doing, the change managers empower these groups to act on the change and signal to them that their input is considered important, thereby reducing resistance to the change.

7) Education and training. A key element of change management is the identification of the education and training needs of the organisation with a view to develop new competencies (knowledge, skills and attitudes) for managing the transition to the desired state. To better manage offshore initiatives, change managers can develop a training curriculum for employees who will be retrained in the new competencies and the training should include topics such as vendor relationship management, cross-cultural communication, contract management, vendor performance monitoring, and conflict management.

8) Pilot projects. Change managers must consider introducing large scale changes such as offshore IT outsourcing gradually through small projects. Pilot projects provide the opportunity to test one or more of the alternative approaches to offshore outsourcing, thus offering valuable lessons for further implementation. Moreover, they are less risky and successful pilot projects can stimulate interest in larger-scale projects. Change managers should highly publicise and even reward success from pilot projects in order to reinforce new behaviours (McNish, 2002).

9) Performance monitoring. Setting up clear measures of performance is vital to the process of managing change. The performance measures should focus on reviewing the effects of the change through systematic information gathering and analysis. Most often performance measures focus on hard indicators (e.g. financial) with little attention paid to soft indicators that measure perceptions of change (e.g. employee satisfaction) (Dover,

2003). A good monitoring system combines elements of both quantitative and qualitative measures to produce timely information about progress toward stated goals and can help detect potential problems before they arrive.

10) Job roles and organisational design. As an organisation considers offshore IT outsourcing, change managers must identify affected roles, and develop new roles and organisational structures for ensuring ongoing management and oversight of offshored activities. It is important to clearly define and communicate the new roles and integrate them into the organisation's performance management system. It is equally important to distinguish the roles and responsibilities between internal and offshore staff. In many cases, the role of the internal staff may be enhanced by shifting their focus to business issues, user interactions and vendor relationship management.

11) Rewards and recognition. One way to promote offshore IT outsourcing is by aligning the rewards and recognition programmes to the new behaviours needed to institutionalise the change. Higgs and Rowland (2001) state that by aligning the rewards and recognition structure, senior management can exhibit strong visible signs that the organisation actually values what it claims to value. The change management team can formally recognise individuals and teams in a public manner for their contributions and for demonstrating new behaviours. In addition, extrinsic rewards such as cash, gifts and pay increases can be provided to acknowledge desired new behaviours. For those who are intrinsically motivated, intrinsic rewards should be implemented to further increase their participation.

12) Continuous improvement. Change managers can play an important role in supporting a continuous improvement culture following a change. A continual improvement mindset can enable organisations to look for new ways to improve their offshored business processes through small incremental changes, thus generating improvements in efficiency and overall organisational performance.

7.3. STUDY LIMITATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

An important limitation of this study is that it describes the process of change as it was experienced by the employees implementing offshore IT outsourcing programmes in one pharmaceutical company. It would be interesting to find out if similar employee reactions to change and problems are observed in other companies. Future researchers may want to expand this study to include other companies in the pharmaceutical industry which are implementing offshore IT outsourcing initiatives.

This study was limited to describing the process through which IT organisations manage change with respect to offshore outsourcing of IT services. Future research, building upon this study, may want to consider applying this research approach to other organisations that are offshoring non-IT services. It would be possible to study companies which are offshoring non-IT services, such as insurance claims processing, automotive design and engineering services, banking and financial services, legal services, medical coding, and billing services, to learn whether the patterns found in this study are generalisable and applicable to companies that offshore these other types of services.

A third limitation of this study is that it describes only the reactions of information systems department staff to the changes related to offshore IT outsourcing. It would be beneficial to expand this study to include employees in other departments, as it would be useful to know if employees in other departments, that is, those who are not directly engaged in implementing the offshore IT initiative, react to the change in a similar fashion.

While the case study approach was an appropriate research strategy for investigating organisational change in relation to offshore IT outsourcing, it was not without limitations. A major limitation of the case study approach is that the findings are not generalisable beyond a particular context. Thus, the findings of this study may not be generalised to the population of pharmaceutical companies since these findings are based on a small number of cases that were purposively chosen. However, the research findings may be applicable to similar settings, that is, large multinational pharmaceutical companies undertaking offshore IT outsourcing activities. Another methodological challenge involves the interpretation of data to ensure accuracy of facts and

interpretations. While the author took necessary steps such as case study reviews by key informants (member checks) to establish trustworthiness, in qualitative research the meaning of data is not always clear and hence may be interpreted in various ways depending on the researcher's assumptions. Triangulation of different data sources was therefore vital to affirm the accuracy of facts and interpretations.

The findings of this study suggest that internal pressures, especially resource constraints, have had a dominant influence on the adoption and use of offshore IT outsourcing. Further study is recommended on the influence of these internal characteristics on motivating change in organisations. Such a study would be of value since internal forces can be pivotal factors in determining when an organisation will respond to pressures of change and which prevailing demands will receive priority in the organisation's change agenda.

Finally, a longitudinal study following the entire process of change related to offshore IT outsourcing (i.e. from diagnosis and planning to institutionalisation) through several years is necessary to determine any long-term impacts of the change. Because this study was carried out during the implementation and early institutionalisation phases of the offshore initiative, it is impossible to know about subsequent change that may be induced by the original initiative. In addition, more time is needed to understand if PharmaCom's information systems departments and its employees sustained the changes they made as result of the offshore initiative. A longitudinal study would be able shed light on these questions.

7.4. CONCLUDING REMARKS

With globalisation of services emerging as an inevitable trend in today's world economy, an increasing number of firms are interested in using offshore IT outsourcing as a strategic tool to deal with cost pressures and rapidly changing market conditions. However, adapting to changes related to offshore IT outsourcing has been complex and challenging for firms to achieve due to various factors including the lack of organisational acceptance that arises from employee fears over job losses and downward wage pressures. Overcoming these obstacles and capturing the benefits of offshore outsourcing requires firms to undertake well planned and executed change management programmes.

While ineffective change management can negatively impact a firm's competitive advantage in the market place, effective change management can positively impact the firm's profitability and shareholder value. A number of recommendations have been made in the preceding pages as a contribution in these regards.

GLOSSARY

Outsourcing Refers to the business practice in which companies cut costs by transferring portions of work to outside suppliers rather than completing it internally.

Information Technology (IT) The hardware and software operated by an organisation to accomplish a function, regardless of the technology involved, whether computers, telecommunications, or other.

Cycle Time The total elapsed time to move a unit of work from the beginning to the end of a physical process.

Bulks These are active drug substances used to manufacture dosage-form products, process medicated animal feeds, or compound prescription medications.

Bio-informatics Refer to the application of computer technology to the management and analysis of biological data. It consists of dedicated software, database architecture and hardware which together help to mine vast quantities of data.

Drugs These are substances with active pharmacological properties in humans and animals. Drugs are compounded with other materials, such as pharmaceutical necessities, to produce a medicinal product.

Enterprise Application Integration (EAI) It is defined as the use of software and computer systems architectural principles to integrate a set of enterprise computer applications.

Enterprise Content Management (ECM) It is any of the strategies and technologies employed in the information technology industry for managing the capture, storage, security, revision control, retrieval, distribution, preservation, and destruction of documents and content.

Environment and Health Safety (EHS) Also known as occupational safety and health, it is a cross-disciplinary area concerned with protecting the safety, health, and welfare of those engaged in work or employment.

Genomics The study of an organism's genome and the use of the genes. It deals with the systematic use of genome information, associated with other data, to provide answers in biology, medicine, and industry. Genomics has the potential of offering new therapeutic methods for the treatment of some diseases, as well as new diagnostic methods.

Good Manufacturing Practices (GMP) A term that is widely used to denote the control and management of manufacturing and quality control testing of pharmaceutical products.

High-Throughput Screening (HTS) Refers to technologies that combine modern robotics, data processing and control software, liquid handling devices, and sensitive detectors to allow researchers to effectively conduct millions of biochemical, genetic or pharmacological tests in a short period of time.

In-Licensing Refers to the practice in which pharmaceutical companies acquire the commercial rights of products made by other firms (usually small biotechnology firms).

In-silico Refers to computer-based design and selection of new molecules in drug discovery.

New Molecular Entity (NME) It is a chemical molecule developed by the innovator company in the early drug discovery stage, which after undergoing clinical trials could translate into a drug that could be a cure for some disease.

Portals Refer to a centralised information system that may contain a wide range of a company's corporate information and provide access to other application systems. This centralised information system enables customers or employees to easily access information such as reports, application forms, or policy documents.

Proteomics The large-scale study of proteins, particularly their structures and functions.

Request for Proposal (RFP) Refers to an invitation for suppliers, through a bidding process, to bid on a specific product or service.

Statement of Work (SOW) A document used in the software Systems Development Life Cycle. A software vendor or services company will send an SOW to notify a client of work about to be undertaken and agreed pricing. It is a brief summary of the financial aspects of a contract.

Service Level Agreement (SLA) It is that part of a service contract in which a certain level of service is agreed upon. An SLA is therefore not a type of service contract, but rather a part of a service contract. A service contract can contain zero, one, or more SLAs. A contract containing SLAs is generally referred to as a performance contract.

Time-to-Market (TTM) Refers to the length of time it takes to get a product from conception to marketplace.

Technology Refers to the knowledge of using tools and machines to do tasks efficiently, but can also involve systems, methods of organisation, and techniques.

Unified Modelling Language (UML) In software engineering, UML is used as a standard language for specifying, visualising, constructing, and documenting the artefacts of software systems.

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Appendix A: Study Participants List and Pseudonyms

Case No.	S. No.	Pseudonym	Employee Type	Department or Organisation	Gender	Business Unit
1	1	RNDNM1	Non-manager	R&D ISD	Female	R&D
	2	RNDNM2	Non-manager	R&D ISD	Male	R&D
	3	RNDNM3	Non-manager	R&D ISD	Male	R&D
	4	RNDNM4	Non-manager	R&D ISD	Male	R&D
	5	RNDMM1	Middle Manager	R&D ISD	Female	R&D
	6	RNDMM2	Middle Manager	R&D ISD	Male	R&D
	7	RNDMM3	Middle Manager	R&D ISD	Male	R&D
	8	RNDSM1	Senior Manager	R&D ISD	Male	R&D
2	9	CORNM1	Non-manager	CIS/Applications Architecture Integration & Standards	Male	Corporate Affairs
	10	CORNM2	Non-manager	CIS/Applications Architecture Integration & Standards	Male	Corporate Affairs
	11	CORNM3	Non-manager	CIS/Applications Architecture Integration & Standards	Female	Corporate Affairs
	12	CORNM4	Non-manager	CIS/Applications Architecture Integration & Standards	Male	Corporate Affairs
	13	CORNM5	Non-manager	CIS/Applications Architecture Integration & Standards	Male	Corporate Affairs
	14	CORSM1	Senior Manager	CIS/Planning and Programme Management	Male	Corporate Affairs
	15	CORSM2	Senior Manager	CIS/Global IT Infrastructure	Male	Corporate Affairs
	16	CORSM3	Senior Manager	CIS/Global IT Infrastructure	Male	Corporate Affairs

3	17	SNMNM1	Non-manager	Sales & Marketing ISD	Male	Sales & Marketing
	18	SNMNM2	Non-manager	Sales & Marketing ISD	Male	Sales & Marketing
	19	SNMMM1	Middle Manager	Sales & Marketing ISD	Male	Sales & Marketing
	20	SNMMM2	Middle Manager	Sales & Marketing ISD	Male	Sales & Marketing
	21	SNMSM1	Senior Manager	Sales & Marketing ISD	Female	Sales & Marketing

Appendix B: Interview Guide used for the Pilot Study

Name: Organisation:
Pseudonym: Gender:

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1. Drivers of change:

A. What is the problem that the company is currently facing that has led to the consideration of an IT offshore initiative?

2. Organisational components involved in change management:

B. What in your view are the success factors that are critical to the success of this change initiative?

C. What are the two or three factors that you think are most critical to the success of the initiative?

D. Based on these critical success factors, what sign would tell you that the change initiative is not going well?

E. What are the things to avoid when managing large-scale change, such as the one under implementation here?

F. What risks do you see in this change?

G. What are the short-term and long-term consequences of offshoring on the IT organisation of the company?

1. Short term:
2. Long-term:

H. When does change management end?

I. What signs are there, if any, that suggest change has been successfully managed?

3. Effects of change – evaluated by the participants

J. Please reflect on past change management experiences where you were not in a position of power relative to that you have today. Can you describe it?

K. What did you like and dislike about those experiences?

L. What do you see as your role in the present change proposition?

M. What do you see as the role of the following people:

1. Sponsors:
2. Other CMT members:
3. Associates:

Appendix C: Interview Guide used for the Main Study

Name: Organisation:
Pseudonym: Gender:

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1. Drivers of change:

A. What is the problem that the company is currently facing that has led to the consideration of an IT offshore initiative?

2. Organisational components involved in change management:

B. What, in your view, are the success factors necessary to make this IT change (i.e. offshore) successful?

C. What are the two or three things that you think are MOST critical to the overall success of this change initiative?

   1. Which of these two or three critical success factors are critical to YOUR project (i.e. the offshore project that you are managing)?

D. What sign would tell you that the IT change initiative is not going well?

E. What are the things to avoid when managing large-scale change, such as the one under implementation here (i.e. offshore)?

F. What specific risks do you see in this change initiative?

G. What are the short-term and long-term consequences of offshoring on the IT organisation of the company?

   1. Short term:
   2. Long term:

H. When, in your view, does change management end?

I. What signs are there, if any, that suggest change has been successfully managed?

3. Effects of change – evaluated by the participants

J. Please reflect on past change management experiences where you were not in a position of power relative to that you have today. Can you describe it?

K. What did you like and dislike about those change management experiences that you just described?

L. What do you see as your role in the present change proposition (i.e. offshore) here at the company?

M. What do you see as the role of the following people:

1. Sponsors:
2. CMT members:
3. Associates:

Appendix D: Sample Interview Transcript

Name: xxxx
Pseudonym: RNDNM1

Organisation: R&D IS
Gender: Female

A. INT: What is the problem that the company is currently facing that has led to the consideration of an IT offshore initiative?

RNDNM1: Well, I say that for PharmaCom the main focus and the driver behind offshore really has to do with budgets and how much we are willing to spend today on technology and maintaining technical staff. The models really have shifted there was a time when we had lots of money to spend on technology and in particular on consulting, but there is really a move against that. The...so for me that's the primary driver and I think there is also a feeling that we can help to augment the staff and the knowledge, and have expertise at a better price that can still focus on technologies that are of great interest to us, because if you look at what we are able to do with our internal staff, its pretty difficult to just keep the entire staff on the cutting age of technology even with our technical team.

INT: Ok.

B. INT: What, in your view, are the success factors necessary to make this IT change (i.e. offshore) successful?

RNDNM1: That is a very good question, Ram. A couple of things come to mind really immediately having worked with the offshore team for a while now. We...one of the main items that people mention really over and over again is our communication, and even really some of the things that we would take for granted in communication that become more of a challenge for us..., because we do have to deal with the technical issues of phones working and not working and then language barriers, I think that's the focus on how you are able to communicate and having the frequency of communication and good ways to confirm that what was stated was understood, its really become that much more critical when you are working with the team with significant resourcing offshore, because you can't, you are missing a lot of the communication we don't have the body language and in some areas you really have no idea how what you are saying was received. And, another thing that affects that is really culture. So, for us, what our expectation is when we get responses or when we ask questions, when we make suggestions...in a culture people can nod or say yes and mean I hear you, as supposed to I

understand you. So that…so really understanding for us, having a better background in what something really means, how you can interpret it, is I think it is pretty important, and I would say that the third thing for us, that we see, has to do with our own maturity and how we manage our projects or how we conduct the various phases, and I do think that we have seen some gaps that we have to fill as far as the level of detail that we are able to provide, you know…in…its been stated even by people and some of the teams that we had a certain level of comfort with having programmer analyst on site because we provided one level up…a pretty high level of requirements typically, then their questions can be answered. They are here, they talk to us, they have more ready access to the business, but in fact that is much more difficult to achieve when you are working with people who aren't there and really where the time difference is such that you effective overlap is less than half of the day.

INT: ok, very good.

C. INT: What are the two or three things that you think are MOST critical to the overall success of this change initiative?

RNDNM1: I think really the…looking at the planning, the timing and seeing whether or not you are able to: 1) Get deliverables; 2) How freely the offshore team communicates with you and, because if you're…the deliverables really tell a story and I think the story that they tell affects all of those areas; there can be an aspect of it that is really a communication break down or something where you haven't understood the kind of cultural indication that a person is making, or that you hadn't provided the right information for them, and that it is more difficult for people to come right back and get that information, because frankly there is latency if you are up at my 3 am or you are working when I am sleeping, and then I am up and I'm working when you are sleeping, we have already spent a day without being able to resolve a problem. So, I think that, I really would say for myself that I feel a need for more detailed documentation and also more formal reviews within the team.

INT: ok.

C.1. INT: Which of these two or three critical success factors are critical to YOUR project (i.e. the offshore project that you are managing)?

RNDNM1: I see both of the areas mentioned as critical to the success of the portal. They are also related to each other. Without effective communications, it will be nearly impossible for our offshore team members to have adequate information from which to

create deliverables requested. Obviously, without deliverables our project fails.

D. INT: What sign would tell you that the IT change initiative is not going well?

RNDNM1: Again I would have to say deliverables tell the story. Are they on time? Do they match the requirements? Are they of a high quality? How many iterations are required before they match the requirements and pass the defined tests? The answers to these questions paint a clear picture of how we're doing. If I have delivery, I can overcome a lot of objections.

E. INT: What are the things to avoid when managing large-scale change, such as the one under implementation here (i.e. offshore)?

RNDNM1: I think one of the major areas of concern is the expectation setting. I can recall that in a lot of the discussions we had about going offshore, it sounded like a panacea where things would be perfect and we are spending so much less money, we are getting the top people and you know, this is just going to be great, so…I would definitely say there is a gap between the picture that was painted and what we are finding, and that's a bit risky because it didn't help us to prepare for what we have. I'll give you an example, in terms of the type of resources that we have, I think we'd really compare them much more to kind of a normal contractor that we bring in, who wasn't the very top level, was definitely not the vendor consultant, and wasn't necessarily a person who had the highest level of experience with the product, but rather someone that we would bring in—I think about

[Programmer A] and [Programmer B] and even some of our associates as we put them on a new project—there is a training, there is a ramping up, there is a whole orientation that has to happen. And for me I feel that, that's the part that was not visible to us; secondly, in terms of expectations, still on expectations but another aspect of it, its just that in understanding the model that we have, so we are using a model that is really more staff augmentation…that's fine. The problem is, I am not sure the people who are going to be using the resources understood that going in, so I guess the whole, just kind of painting the picture, an accurate picture, is something that that may be we struggle with a bit, its new for all of us, so we went in all thinking 'oh great', 'problem solved', 'we had no money', 'its ok', with this small amount of money we can get the same thing done, and I think we really having to adjust to the fact that nothing is free, everything comes at a price.

INT: ok.

F. INT: What specific risks do you see in this change initiative?

RNDNM1: Perhaps the risk I would highlight here today has to do with a company's culture. What we have seen is that, as our company's culture changes, initiatives are rolled back. For us, we had executive sponsorship for the offshore initiative and when the executives are changed, the power shifts and this puts the initiative at risk. As a result, there is a risk to the value of the investments (financial, human resources, technology, processes) not being realized. For example, without this offshore initiative, we could not have realized the value from new technologies like Tibco.

G. INT: What are the short-term and long-term consequences of offshoring on the IT organisation of the company?

RNDNM1: I have some feelings about it—for the company but also for the kind of the industry and the country, as I think about it. You know, for our organisation, I can see clear benefits, clear financial benefits, potentially. Short-term, I think, it's painful. I think its painful and it has to be managed closely...with the team that I have worked with, I really felt a lot of the change issue was even integrating the offshore resources into the team; so every group that decides to take it on, really has to think carefully about the model they want to use, the proportion of onshore versus offshore, the kind of positions of leadership that will be needed and in what locations; so, this is...so for me, I think, short-term there is a lot of pain, a lot of learning, and a need to just recognize nothing great happens overnight, it really takes time to build something meaningful. But, long-term, as really we see with other companies, other examples, you know, there is a tremendous potential to have a relationship and to really find the right niche for the use of the offshore platforms. We have seen examples in some industries where the offshore groups are able to handle the customer service, or there is some aspect of the work you are doing that is offshore and then there is another aspect that's onshore, because we really still have to balance the need to be a close to customers, with customers, operating on their time zone, and able to relate to them on a certain level...you know, makes you feel comfortable that we really get it, we really get the issue, but we'll face continuing challenges in budget; so really, longer-term, if we are able to do it right, it can help us to get more done.

INT: very good.

H. INT: When, in your view, does change management end?

RNDNM1: Well, in the environment we are in, I am not even sure it'll end. The reason I

say that is that...we just seem to be in an environment that is constantly changing and bringing us challenges; so, for me, I think we have to always assess to what degree we need to manage processes and manage the impact of the new conditions; it really seems for our industry in particular, [which is] still in a state of flux, and there even outside pressures, lots of questions about the decisions to be made politically, economically, even regarding offshore in particular, some are very pro and some are very much against it; so there should be times where we would have less challenge and so, for me, what I would expect is a team that comprises onshore and offshore components;

You really no longer think of the onshore and offshore and you don't have this issue of—oh they are not on the call, or its too late to call them, we are really...the team itself has begun to adapt and find this core time for key decisions, key reviews, because if you are going to work with people who are in different time zones, you have to find some common area to function, you can't just leave them out of all the discussion and say ok now can you do this? Its not very productive, I would say; so that would be, for me, a sign that things are moving in the right direction that the teams themselves are beginning to see themselves as one and that for me is still...for my team, I can say that has not happened 100 percent, and I have to continue to look into why would they have not been there, and actually I do know that in some cases some calls have been so painful that, you know, they have been disconnected several times so they couldn't continue, but I also know that there are times when it was just perceived we'll let them know later, or its not so important, or may be we hadn't made all the adjustments we need to make because we know what our core hours of operating with the offshore members are, though we haven't necessarily shifted the activities to match it.

INT: ok.

I. INT: What signs are there, if any, that suggest change has been successfully managed?

RNDNM1: Several signs suggest successful change management. Results which meet the objectives of the initiative, support for the change during all phases of the process (this continues to be true as the change moves into a normal operating mode) and an understanding of the lessons learned during the process. The application of what was learned to other change initiatives indicates a more thorough treatment of the change process.

J. INT: Please reflect on past change management experiences where you were not in a position of power relative to that you have today. Can you describe it?

RNDNM1: I would say, I would think about the times where we have had management say we are doing something, we really don't care to think, we are not asking your opinion, but here is the direction that were going, and I think I have to say that for me it really requires a lot of kind of self-talk to keep the same level of enthusiasm and to maintain a positive attitude about the change. The other thing I would have to say is that, during those times, typically, they are preceded by a lot of rumours, guessing what is going to happen, uncertainty of how it'll affect the organisation overall, so at least some level of chaos and inertia and I would say that, really…I could see people who are, who don't understand the reason for a change, really having it affect/negatively impact their morale and their productivity, because I think on one level, we always ask ourselves what's wrong; we are not by nature really those who run towards change, you know, people in general, so I think we tend to ask what's wrong, what's wrong with what we have today, why are you doing that and we spend quite a lot of time trying to figure that out. The good thing really came out of, I think…initially self-talk, so you have to decide yourself whether or not you can view it positively, but then at the same time, if you are able to say this is new and, new means opportunity, as information starts to come out that makes it something that makes sense, you know, where you actually say 'ok, that's not such bad idea', this could be workable; I can even think of examples related to that—with the takeover, the takeover of [PharmaCom], the hostile takeover which [Person X] now describes as a way to accelerate a friendly merger, so I would say even though we'll still see lots of attrition, the amount of information as now coming out is starting to help, it is helping people to some degree, but everywhere where there is a gap it's just leaves room for doubt and confusion and inertia—now, people stop making decisions or they start making strange decisions. Did I answer your question?

INT: ok, very good.

K. INT: What did you like and dislike about those change management experiences that you just described?

RNDNM1: The main lesson is that involvement and awareness of those who need to be engaged to ensure the success of the change is critical to the success of these initiatives.

L. INT: What do you see as your role in the present change proposition (i.e. offshore) here at the company?

RNDNM1: I think in the offshore context with..., because I do have a team that's engaged with some members of offshore platform, really, you know, there is a responsibility: 1) want to set an example; 2) to organise the activities in such a way that they really are integrated as part of the team; and 3) to help to clarify the reasons for doing it and also the reasons that we need to make adjustments and to remind people that it is more productive for us when we make those adjustments. So..., it's a big job, it's a big job, I would say, but I share it, you know, with the team.

INT: very good.

M. INT: What do you see as the role of the following people: 1) Sponsors, 2) CMT members, and 3) Associates?

RNDNM1: I think that Person Y [sponsor], in his position, really has a very strong voice and has a lot of influence over how this would be perceived, both by our business customers who'll definitely be affected by this and also the people within the IS organisation.

To really be able to paint a picture of the offshore platform and the integration of it that I think would show people that its win-win and that message really needs to be carried forward by other associates when they receive that message.

And the...now, in terms of associates, I am trying to put myself in the shoes of people who are here working as counter parts to individuals that are in offshore team, and I really see us having to make a conscious decision to make it work...and to look for ways to make it work, for sure we have to be rigorous with them and demanding of them. We have a responsibility to [PharmaCom] to hold them accountable to what has been promised, to definitely follow through on a process, but I would see as really having to make a decision that—ok, this is part of the strategy; we are here; we understand that is an important aspect of what we do and that we have to put ourselves to the task.

You know, really call ourselves out, if we are not doing what has to be done to help support this initiative.

INT: Excellent. Thank you.

Appendix E: Initial Coding Template

Version: 1.0
Date: June 27, 2006

A. CONTEXT

1. External Forces:
    - Economic
    - Political/Legal
    - Social-cultural
    - Technology
2. Internal Forces:
    - Leadership
    - Resources

B. DIAGNOSIS AND PLANNING

1. Recognising the need for change:
    - Sense of urgency
    - Vision for change
2. Change implementation strategy
3. Implementation planning:
    - Change management team
    - Stakeholder management
    - Education and training
    - Feedback mechanisms
    - Performance measurement

C. IMPLEMENTATION

1. Communicate the vision
2. Implementation approach
3. Pilot projects
4. Resistance management
5. Organisational culture

D. INSTITUTIONALISATION

1. Rewards and recognition
2. Organisation learning
3. Evaluating and sustaining the change

Appendix F: Final Code Book and Definitions

Version: 3.0

Date: December 21, 2006

A. CONTEXT

1. External Forces:

- Economic (EXECONO): A segment indicating pressures from the current systems of production, distribution and consumption of wealth in which the industry operates (Tushman and Anderson, 1986).
- Political/Legal (EXPOLEG): This segment illustrates pressures from the legal, regulatory and political systems within which the industry functions (Tushman and Anderson, 1986).
- Technology (EXTECHY): This segment refers to pressures arising from improvements in the current state of knowledge with regard to production of goods and services in the industry (Tushman and Anderson, 1986).

2. Internal Forces:

- Leadership (INLEADP): This segment describes influence or actions by executives to move the organisation toward its goals (Huber and Glick, 1993).
- Resources (INRESOU): This segment refers to the lack of adequate human and financial resources to provide IT services and solutions in support of business activities.

B. DIAGNOSIS AND PLANNING

1. Diagnosis of the need for change:

- Establish a sense of urgency (DGSENUR): This segment reflects statements that status quo is more dangerous than pursuing less familiar options (Kotter, 1998).
- Develop a vision for change (DGVISON): This segment describes the view of what the leadership and others involved in the diagnostic process think the organisation should look like in the future (Kotter, 1998).
- Data gathering and analysis (DGANALY): A segment indicating statements

referring to the assessment of present state of organisational functioning and the desired state of performance. The activities include assessing organisational readiness, understanding internal needs, examining the outsourcing market, assessing risks, identifying offshore suppliers, and an analysis of cost and pricing factors.

2. Strategy for change (STRATGY):

This segment references to the overall change strategy encompassing the approach to change management, the scope of the change, the goals and objectives to be achieved, the key issues to be managed, the alignment with corporate objectives, and the governance mechanisms for achieving the change.

3. Change implementation planning:

- Change management team (CICMGTM): This segment refers to a group of change mangers, with enough power, to lead the change effort (Kotter, 1998).
- Benefit identification and delivery (CIBENID): A segment portraying statements referring to the identification of the benefits to be produced by the change and how they will be delivered.
- Stakeholder management (CISTKMG): This segment involves statements relating to the identification and influencing of individuals and groups who might support or resist the change (Hayes, 2002).
- Resource allocation (CIRSALL): This segment not only refers to statements involving the allocation of human and financial resources to implement the change initiative, but also to time, equipment, hardware, software, and facilities.
- Education and training (CIEDTRG): A segment that describes details on activities that aim to provide the employees with the knowledge, skills, tools and techniques necessary to perform an effective role within the organisation once the change has been implemented.
- Feedback mechanisms (CIFEEDM): A segment that refers to statements made regarding feedback devices and control mechanisms to monitor the progress of the change initiative.

- Vendor selection and sourcing (CIVENSL): This segment describes statements that refer to selection of vendors and operating models, and negotiation of contracts and service level agreements.
- Performance measurement (CIPERME): A segment highlighting efforts to specify quantitative and qualitative performance measures to gauge progress of the change initiative and to maintain alignment with business objectives for long-term success.

C. IMPLEMENTATION

- Communicate the vision (IMCOMVN): This segment indicates statements relating to the communications to inform the employees about the change and how the change will affect them (Kotter, 1998).
- Implementation approach (IMAPRCH): A segment that identifies the type of approach used for change implementation (top-down vs. bottom-up).
- Transition management (IMTRANS): A segment reflecting statements that relate to the transfer of knowledge and documentation of tasks, technologies, workflows and functions to vendors.
- Pilot projects (IMPILPR): A segment that indicates the use of pilot projects to serve as effective test beds for the change initiative (Hayes, 2002).
- IT operations (IMOPMGT): A segment that provides insights into the overall management of day-to-day production operations, infrastructure and service management, including work-related processes, project management, issue resolution, quality control, and reporting.
- Resistance management (IMRESMG): A segment indicating statements reflecting resistance to change as well as strategies to manage the resistance (Hayes, 2002).
- Organisational culture (IMORCUL): A segment indicating statements relating to the assumptions, values and beliefs underlying the organisation (Brown, 1995).

D. INSTITUTIONALISATION

- Job roles and organisational design (CIJRNDE): A segment that reflects statements relating to new job roles and organisational designs to implement and manage the change.
- Rewards and recognition (CIRWREG): A segment which describes activities to encourage experimentation and change, as well as activities that recognise and reward new behaviours which are directed toward the achievement of the change.
- Organisation learning (IMORLER): A segment that highlights statements pointing out collective learning or the creation of conditions that facilitate collective learning for continuous improvement of the change initiative (Argyris and Schon, 1996).
- Sustaining the change (IMRFCHG): This segment describes activities to review progress and develop corrective actions as necessary to reach the desired end state based on performance monitoring and feedback (Hayes, 2002).

E. NO RESPONSE (NORESPN): No response to the question.

Note: Categories that are not cited emerged from the data.

Appendix G: Feedback from Key Informants and Expert Review

Interviewee	Comments
RNDNM1	Hi Ram, This case study accurately describes the circumstances surrounding the offshore effort. It considers both the internal and external factors driving the organisation's direction. Moreover, by outlining the considerations and impacts on the associates in the company, it reveals the human side of the change and change management. It is a great effort.
CORNM4	Dear Mr. Ramanathan, First, my apology for this delayed reply. I have reviewed, in detail, your case study of the offshore effort in the corporate IS organisation. I find it to be an accurate and factual representation of the organisation and the initiative. Nice job! Thank you for inviting my participation. Do not hesitate to contact me for further reference or involvement. Best Regards
CORNM3	Ram, this is very good. My only surprise is that there is not discussion about why we closed the offshoring … In any case, this is very thorough - congratulations.

RNDMM3	Hi Ram, I think that this document is a very good depiction of the situation in R&D at that time. You accurately identify both the external economic pressure, and the significant internal expectations for R&D ISD, as the drivers for a need for change. I would emphasise on the on the latter; IT was positioned as a key enabler for the R&D activities, as you describe at the beginning of the case, and this not-so-usual stance required adjustments. At the same time, I understand that something else was going on. The IT business had matured, and this market became very competitive. The resistance of the local/western workers was well motivated by their realisation of this inevitable situation. While the senior management emphasised on the communication, and as you describe, this led to little success. I believe that the cited benefits associated with this change were not properly identified, and the communication addressed the employees concerns very remotely. That probably contributed to some defensive attitudes cited in your case. Corporate IT is continuing to redefine itself, and I believe that the trend now is to focus on the development of business analysis skills. Corporate IT has realised that traditional IT activities cannot be proposed as its core value, as offshoring provides more efficient operations. Business analysis would allow the R&D ISD population to demonstrate significant added value. I think that if such a shift in the positioning of the R&D ISD population had been identified in the visioning and benefit identification phases, the subsequent implementation and institutionalisation phases would have been greatly eased.

SNMNM1	Hi TR, Please take my comments purely as reflection of what I received. I very much enjoy writing, and I tend to be very critical only to improve the cohesiveness of a piece. It appears that you only sent me a portion of the paper, but I didn't really see a clearly defined thesis statement. Was there supposed to be a main idea to the paper? Conclusion? You did a good job supporting your statements with facts. Finally, I included some comments within the word document. You may do with them what you like. As you know, I did not have a good experience with offshore development, and believe that it should only be used like 'manual labour'. As an analogy, for a building, we have very experienced and expensive architects (requirements) and engineers (design), but then the people actually constructing the building, while skilled, can be lower-cost 'offshore' employees. Similarly, with my experience on [Project X], we had to do the requirements (and take back the design from them when it was apparent that they were not able to adequately do it), then they did the construction (albeit poorly). I don't know who your Sr. Manager contact was, but I'm glad I don't work for her. The real issue I had with [Project X] was that management only saw the bottom line: the project was implemented a little late, but still cheaper than what it would have cost with domestic resources. But at what cost? The company employees were totally stressed out, worked killer hours (remember the time difference) and morale suffered. Organisationally, offshore development should have been set up differently to begin with. However, the messy details of implementation get lost after the project control book is closed. I hope this is what you were looking for. If not, call me to discuss further. Thanks

Expert Review Comments	
PRTM (Life Sciences Consulting Company)	Dear Ram, Many thanks for forwarding the summary of your thesis chapter - Cross Case Analysis. I have reviewed it in detail and my comments are below. Overall, I think the framework that you have used and the change process components are very relevant based on my experience in a number of IT implementations in the Life Sciences industry. The findings that support each change process component are highly insightful. The facts and conclusions broadly represent experiences of the other organisations that I have worked with. The economic element that you have identified is the true driving force for these initiatives. However, as you have outlined, not enough thought is given to people related factors. Some additional factors that I have observed impact the direction and success of these initiatives are as follows: • Personal preferences of senior IT management • Lack of specific skill sets to support certain business initiatives • Recognition that strategic long term roadmaps are essential at an early stage • Realisation of the benefits expected is critical to institutionalisation Overall, I enjoyed reading your thesis summary. I believe it has a strong potential to form the back bones of a framework that would be very helpful to industry. Good luck with you endeavours. Regards, **XXXXX** Principal **PRTM** **Where Innovation Operates** **T** +1 202.756.1731 M +1 703.362.6673 www.prtm.com

Appendix H: Doctoral Research Proposal

Managing organisational change associated with offshore outsourcing of information technology services: A case study of a multinational company

Doctoral Research Proposal

BM-438: Business Research Project 2

Doctor of Business Administration Programme

Dr. Norman Pigden

Jane Gibbon

Summer 2005

T.R. Ramanathan

Newcastle Business School

Northumbria University

Introduction

Problem Statement

There is currently a paucity of empirical research dealing with how organisational change associated with offshore outsourcing of information technology services is managed in multinational companies. Much of the research has focused on how organisational-development based large group interventions have been used as part of change efforts aimed at, for example, strategic planning, organisational redesign, total quality management, process improvement and so forth (Purser, 2005), but not many researchers have studied how change is managed at different stages of the offshore outsourcing lifecycle.

Background to the Research

Origins of Interest

The original interest in this topic arose when the author was enrolled in a postgraduate course on management of organisational change in the Wharton Business School at the University of Pennsylvania in Autumn 2003. As part of a project for this class, the author and three fellow students conducted a preliminary investigation of how PharmaCom[1], a global pharmaceutical company where the author is employed, planned to implement its offshore outsourcing strategy. The study project examined the potential impact of change on the human resources of the Information Systems (IS) organisation using theoretical concepts, and highlighted the relevance and need for a more in-depth study on this topic.

Industry Context

The business environment for large pharmaceutical companies has changed considerably in recent years. The cost of developing a new drug has increased nearly 3.5 times to approximately $802 million over the last 15 years, according to a study (DiMasi, Hansen, and Grabowski, 2003). Pharmaceutical companies are spending an average of 17% of sales or $3 billion per year on research and development (R&D) activities (PharmaCom, 2003a), and 'up to 75 per cent of these enormous costs are due to failure of drugs in development' (DiMasi, *et al.*, 2003, p.19). Experts argue that the vast sums invested in R&D of large pharmaceutical companies are not producing adequate returns in terms of well-stocked and promising product pipelines. Some even claim that the 'blockbuster

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[1] Pseudonym for the company researched in this study.

approach'[2], which served the industry well for several decades, is now expected to 'deliver just 5% return on investment—significantly lower than the industry's risk-adjusted cost of capital' (Gilbert, Henske, and Singh, 2003, p.2).

Compounding the steep rise in the cost of pharmaceutical R&D is the length of time companies need to recoup their investment. While new technologies have vastly increased the number of drug targets researchers are able to screen, they have yet to shorten drug development times, which still range between 10 and 15 years (PharmaCom, 2003a). Further, the U.S. Food and Drug Administration's (FDA) median approval time for new drugs has increased since the year 2000, despite the implementation of the FDA Modernization Act of 1997. In fact, the median time increased from 11.6 months in 1999 to 15.6 months in 2000 (Food and Drug Administration, 2001).

At the same time, we are witnessing an industry-wide decline in R&D productivity. To illustrate, in 1996 there were 53 new drugs introduced and in 2002 this number had dropped to a mere 17 (Begley, 2004). Shareholders are particularly tuned to the bad news and financial analysts are monitoring company pulses in terms of drug pipeline movements instead of looking at the way innovation is managed. Currently, most pharmaceutical company valuations are weighted heavily on the perceived value of the R&D pipeline.

Under these circumstances, pharmaceutical companies are currently faced with two major challenges to generating long-term growth: controlling costs, and improving R&D productivity. Such a state of the industry has led many companies to embrace sourcing strategies to control costs and improve performance. For example, GlaxoSmithKline, which has an extremely large procurement organisation with an annual outlay of $12 billion, has set a goal of developing what it calls 'best value purchasing' strategies (Hannon, 2004). The purpose of these strategies is to ensure that the company gets the best possible purchase price and cost for everything it buys. Thus, strategic sourcing decisions are not only more important and urgent than ever for the industry, but they offer the opportunity to 'extract cash from the value chain and set the stage for continued product and service innovation and growth' (McNamara, Anderson and Kapur, 2001, p.1).

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[2] The blockbuster approach commits a large part of a company's investment to creating branded products that achieve global sales of over $1 billion.

Although the decisions to outsource have been traditionally driven by cost savings and are based on the assumption that the advantages of outsourcing outweigh its disadvantages, outsourcing does present some significant risks that require careful consideration. One of the major disadvantages of outsourcing is that the outsourcing organisation becomes increasingly dependent on the external service provider to perform certain essential functions (e.g. customer service), which can subsequently result in the loss of control over those functions or activities. Other disadvantages include threats to intellectual property, customer dissatisfaction arising from poor quality of service, underestimating cost savings because of hidden costs, and so forth. According to Scheier (1997, web page), 'a survey of 431 U.S. and Canadian chief information officers, conducted...by consulting firm Deloitte and Touche, showed them consistently disappointed with outsourcers'.

Like most other companies in the pharmaceutical industry, 'PharmaCom' is not insulated from any of the pressures discussed in the preceding paragraphs. To address these challenges, in late 2003, the executive leadership at PharmaCom 'endorsed a set of individual company-wide initiatives [change] aimed at improving the quality of their processes and business, focusing on value-adding activities, eliminating inefficiencies and freeing up resources to fund their future' (PharmaCom, 2003b). One initiative that was actively explored as part of these efforts is the offshore outsourcing of IT services in the IS organisation.

Offshore Outsourcing at PharmaCom

A recent study by Gartner (2003) points out that, by 2004, all U.S. enterprises must consider offshore outsourcing of IT services as one of their top strategic sourcing options to achieve cost savings. In fact, this study claims that the potential cost savings from offshore delivery can be as much as 54%. Moreover, 'offshore outsourcing can lead to decreased IT costs, reduced time to market and increased reliability of IT services' (Dallas, 2003). As of 2003, an estimated 200 of the Fortune 500 companies were using some form of offshore services, and the volume of this work was only projected to increase to $17.6 billion by 2005 from $5.5 billion in 2001 (PharmaCom, 2003c). These companies are 'going overseas to buy services ranging from customer contact at call centres to complex financial analyses' (Aron, 2003).

Unlike other industries such as banking, insurance and financial services, the pharmaceutical industry has been slow to embark on this new paradigm shift toward offshore outsourcing. To illustrate, a survey of 1,346 North American and European decision makers by Forrester Research, points out that only 19 percent of the industry was actively using offshore IT services as of June 2004 (McCarthy, 2004). The industry's interest in embracing the offshore business model stems from a host of factors that have been impacting its bottom-line in recent years: the recent U.S. economic recession, legislative proposals to re-import drugs from Canada and elsewhere to curb the rising costs of prescription drugs, a proposal (McCain-Schumer bill) to reform the Hatch-Waxman Act which would limit patent protection, Medicare and state-level reform proposals that aim at curtailing the price of prescription drugs (e.g. Maine Rx Programme), rising R&D costs, competition from generic drug makers, curbs on healthcare spending in many countries, among others.

In order to support the company's overall objectives of promoting growth and gaining efficiency, in 2003, PharmaCom's leadership decided to explore the IT offshore trend and exploit its potential (PharmaCom, 2003d). There are a number of implications for this decision, such as quality concerns, data privacy, regulatory concerns, customer satisfaction, downsizing existing contractor resources, among other issues. The effort is led by a change management group, known as the Offshore Team (OT), comprising of senior staff from different subunits of the IS organisation. The OT is responsible for planning and implementing the offshore sourcing strategy, taking into account the impact such a move would have on the company's business and the IS organisation's human resources.

Research Purpose and Objectives

The purpose of this study is to understand management of organisational change associated with offshore outsourcing of IT services in a multinational company. The study will seek to examine both internal and external pressures to the IS organisation that are either pushing for or resisting the current change proposition. The author can therefore investigate the complexities of the current business environment that have led to the consideration of offshore outsourcing.

Examining how the IS organisation's leadership (i.e. OT) envisions and plans the offshore programme implementation, taking into account the implications of this sourcing strategy,

will provide insight into the following areas: the rationale behind the OT's implementation strategies and their consequences, and the types of issues that the OT accounted for and failed to account for in their planning.

The author will investigate the IS organisation's approach to communicate its change plans down the organisational hierarchy and how these are received by the IS organisation's staff members, including those who may be adversely affected by the change. Finally, the study will inquire how the different levels of staff prepare themselves in anticipation of the change. This will yield insight into aspects such as changes to the job roles and responsibilities of the staff members and changes to organisational processes.

The overarching research question posed by this study is: *how is organisational change associated with offshore outsourcing of information technology services managed in a multinational company*? The case organisation identified for empirical data collection is the IS organisation of PharmaCom. The study will seek to address the above research question by specifically investigating the following areas:

1) What are the forces that are either pushing for or resisting the change?
2) How does the OT construct plans for implementation in light of the implications for this sourcing strategy (e.g. quality concerns, data privacy)?
3) How does the IS organisation communicate its change plans down the hierarchy and how are these received?
4) How do the different levels of staff prepare themselves in anticipation of the change?

Literature Review

Theories of Change

In business and management context organisational change refers to planned, organisation-wide change that is undertaken to accomplish a specific goal. Examples of organisation-wide changes include implementing new technologies, mergers or acquisitions, downsizing, restructuring operations, introducing new programmes such as Total Quality Management, etc. These systemic changes are usually prompted by a need to maintain or improve an organisation's effectiveness (Hayes, 2002).

In order to understand and explain the process of how and why organisations change, researchers have borrowed concepts, metaphors and theories from other disciplines, thus creating a diversity of theories and concepts as well as the compartmentalisation of perspectives (Van de Ven and Poole, 1995). A good majority of these theoretical perspectives on change focus on the relationship between the organisation and its environment, with roots in organisational theory.

Two prominent organisational theory perspectives deserve mention here, population ecology and institutional theory, both of which highlight the difficulty in accomplishing change. Population ecology argues that 'to survive, organisations must be compatible with their environments, which include all the external social, economic, and political conditions that influence their actions', while institutional theory maintains that 'organisations must adapt quickly enough to maintain their legitimacy and the resources they need to stay viable' (Druckman, Singer and Van Cott, 1997, p.2).

Contingency theory, which serves as a corrective to institutional theory (Corvig, 2005), reasons that there is no one best way of organising, and 'the best way to organise depends on the nature of the environment to which the organisation relates' (Scott, 1992, p.89). From an adaptation standpoint, management of change requires the identification of environmental variables and the design of organisational architecture and procedures to match the changing external influences (Lawrence and Lorsch, 1967; Thompson, 1967). The problem with this contingency model of change is that it is aprocessual and apolitical in character (Dawson, 2003).

Over the past decade or so, a number of researchers have turned to complexity theory to understand change (Houchin and MacLean, 2005). According to complexity theorists, organisational change is 'characterized as a process that unfolds over time, revealing periods of greater and lesser instability, in which the restlessness of a system is an instinctive response toward survival in a continually changing environment' (Ferdig and Ludema, 2003, p.8).

Nature and Dimensions of Change

Nadler and Tushman (1995) have proposed the following typology to understand and manage change: incremental and discontinuous. Incremental change is defined as a series of initiatives, each of which 'attempts to build on the work that has already been

accomplished and improves the functioning of the enterprise in relatively small increments' (Nadler and Tushman, 1995, p.22). Discontinuous or deep change, on the other hand, involves fundamental transformation of the system. 'It is change that is major in scope, discontinuous with the past and generally irreversible. The deep change effort distorts existing patterns of action and involves taking risks' (Quinn, 1996, p.3). While incremental change is concerned 'with those periods when the industry is in equilibrium and the focus for change is 'doing things better' through a process of continuous tinkering, adaptation and modification' (Hayes, 2002, p.6), discontinuous change aims at realigning the organisation with its environment and occurs during periods of disequilibrium. This theory, known as punctuated equilibrium theory, suggests that 'radical and discontinuous change of all or most organisational activities is necessary to break the grip of strong inertia' (Romanelli and Tushman, 1994, p.1143). In this model, organisations advance through convergent periods (i.e. long periods of incremental change and adaptation) punctuated by reorientations (i.e. short periods of radical, discontinuous change) which demark and set bearings for the next convergent period (Tushman and Romanelli, 1985). Further, change occurs in the following organisational activity domains which individually and as they interrelate with each other yield different levels of performance and inertia: organisational culture, strategy, structure, power distributions, and control systems (Romanelli and Tushman, 1994). Gersick (1991) notes the following cautions in applying the punctuated equilibrium model: first, avoid the assumption that this is the only way that systems change, and second, avoid transporting models from one research domain to another without first questioning how it might apply in other settings. These limitations paved the way for new research on pace and sequencing of action in change processes (Gersick, 1994; Weick and Quinn, 1999). For example, Gersick's (1994) research distinguishes between temporal and event pacing, the two mechanisms that are used to modulate the speed and course of change. While temporal pacing enables punctuated change at milestone transition points and is suitable for non-routine situations, event pacing is appropriate for fostering incremental change because it focuses on specific events that indicate when actions are to be initiated. Weick (1999), on the other hand, emphasises the need to move beyond action sequencing and focus on developing process theory using stories that provide meaning to process. To Weick (1995), change is an occasion for sense making in organisations.

Dawson (2003) describes organisational change as having four important dimensions: 1) movement over time from a present state to a future state of the organisation, 2) the scale or scope of change focusing on permanent, influential, large-scale operational and strategic changes, 3) the political dimension indicating the varying degrees of political intensity depending on the settings and types of change initiatives, and 4) the substantive element of change, which refers to the essential nature and content of the change in question. Pettigrew (1990) claims that 'content' is a critical dimension of organisational change, and it constitutes four distinct elements: formal structures, systems of shared beliefs, work processes, and social relationships (Huy, 2001). Although the volume of literature dealing with content has increased during the last two decades, 'the field of organisational change is far from mature in understanding the dynamics and effects of time, process, discontinuity, and context' (Pettigrew, Woodman and Cameron, 2001, p.697). A number of researchers have pointed out the absence of 'process aspects' in this literature (Pettigrew, 1987; Pettigrew, Ferlie and McKee, 1992; Slack, 1997).

The interest of this study lies in the processual aspects of change. Process refers to a series of individual and collective events, actions and activities that unfold over a period of time within a context (Pettigrew, *et al.*, 2001). It is based on the premise that 'organisations undergoing change comprise a number of dynamic states which interlock and overlap, the processes associated with change should be analysed 'as-they-happen' so that their emergent character can be understood within the context in which they take place' (Dawson, 2003, pp.41-42). Therefore, research from a processual perspective not only 'involves the interrogation of phenomena over time using the language of what, who, where, why, when, and how', but also studying events and the social construction of events to identify patterns in the process of changing (Pettigrew, *et al.*, 2001, p.700). In fact, a growing number of process-oriented research studies, some reported as case study narratives, have been published in recent years (Pettigrew 1985; Dawson, 1994; Clark, 1995). Although change may be studied using different frameworks or models, this study will utilise Dawson's (2003) process-based temporal framework to examine change. First, the framework will help analyse change by breaking down the complex change process into general timeframes such as initial conception of the need to change, process of change, and operation of new work practices. More specifically, these general timeframes will provide a structure for constructing data categories from untidy change data, along the lines of themes or activities and tasks. Second, in so doing, the framework will aid in

the examination of the interconnected dynamics of politics, context and substance (type and scale), which shape the change. The author believes that Dawson's framework will be ideally suited for sorting and organising large amounts of processual data, collected especially through interviews and direct observation.

Research Framework and Methodology

Philosophies of Management Research

Gephart (1999) describes positivism, interpretivism and critical postmodernism as the three prominent paradigms in contemporary social research, and interpretivism and critical postmodernism as increasingly common in management and organisational scholarship. In order to understand how change is managed in organisations, which is a social phenomenon, traditional positivistic methods are not adequate. The interpretive paradigm is perhaps better suited to study shifting, multiple, and emergent social realities in organisations. An interpretive approach to the task at hand not only challenges the dominant positivistic methods by rejecting the objectivist view of reality, but also offers 'alternative theoretical, methodological and practical approaches to research on management and organisations' (Gephart, 1999).

At a fundamental level, interpretivism conceives of a world where there is no single reality, but multiple realities exist and these are formed in the minds of individuals. It is concerned with meaning and understanding social members' definition of the situation (Schwandt, 1994). In the interpretive view, 'knowledge and meaning are acts of interpretation hence there is no objective knowledge which is independent of thinking, reasoning humans' (Gephart, 1999, web page). Therefore, in order to understand meaningful social action, the researcher needs '... to explore the subjective meanings motivating people's actions in order to be able to understand these' (Saunders, Lewis and Thornhill, 2003, p.84) by continuous engagement in a process of interpretation and reconstruction of reality based on the constructions of those interviewed or observed (Flick, 1998).

Ontology and Epistemology of Interpretivism

The ontological position that is compatible with interpretivism is one of a relativist. The author's ontological position implies that the different participants would have experienced and perceived the change programme differently, 'all of which deserve attention and all of which are experienced as real' (Patton, 2002, p.98). The chief purpose

of this study thus becomes capturing the different perspectives of the participants and interpreting their multiple realities.

The basic epistemological position of interpretivism is that knowledge is socially constructed and is based on subjective interpretation. This subjectivist view holds that the researcher cannot be separated from what is being observed, and the findings are a product of the process of interaction between the two. Because of the contextual and subjective nature of interpretive research, the author will state subjectivity and work from a realized bias and connected ethical concerns for the research to be trustworthy (Travis, 1999).

Hermeneutic Methodology

The methodology of interpretivism can be best described as hermeneutics, a method of interpreting text. The key assumptions of hermeneutics include 'humans experience the world through language and this language provides both understanding and knowledge' (Byrne, 2001, web page). As a theoretical approach, it holds the premise that 'what something means depends on the cultural context in which it was originally created as well as the cultural context within which it is subsequently interpreted' (Patton, 2002, p.113). Historically hermeneutics has been associated with the interpretation of biblical texts, but in the modern context it has come to include the interpretation of interviews and observed actions, which inform qualitative inquiry (Patton, 2002).

Research in the hermeneutic tradition involves eliciting and refining individual constructions hermeneutically, comparing and contrasting them dialectically, with the aim of generating one or a few social constructions, and finally, 'shared understanding is generally a result rather than the result of 100 percent conflict or consensus' (Travis, 1999, p.1042). As a research methodology, Byrne (1998, web page) notes: 'hermeneutics assumes meaning making embedded in the process of dialogue between interpreter and narrator. The hermeneutic circle is a way of articulating and interpreting discourse. This way of understanding assumes dialogue and movement between wholes of texts and parts of texts'.

Analysis in this tradition involves texts as raw data, and 'these texts can be generated by stories, interviews, participant observations, diaries, literature, letters, or other relevant documents' (Byrne, 2001, web page). Using content analysis, for example, core meanings

that are called themes or patterns can be identified from the raw data, which communicate findings that reflect knowledge of the phenomenon under study.

One of the major criticisms levelled against the hermeneutic methodology is that researcher subjectivity may inherently bias the research findings. Although it is possible to minimise bias with techniques such as bracketing, it is impossible to fully eliminate this source of error. Notwithstanding this limitation, hermeneutic methodology is particularly well suited to understand the complex role of language in shaping organisational realities because of its ability to consider the 'temporality' and 'contextuality' of organisational constructs, which are linguistically pre-constituted (Thatchenkery, 1994).

Justification of the Interpretive Approach

A survey of recent management research literature indicates an increase in the number of studies that adopt hermeneutic methods (e.g. Noorderhaven, 2000; Mercier, 1994; Llewellyn, 1993). Llewellyn (1993) claims that hermeneutic methods are appropriate for the analysis of 'transitional periods' (such as change) in organisational fields. Furthermore, Barry (1997) points out that interventionist approaches, which are informed by 'interpretive', 'constructivist' and 'symbolist' views, have recently gained currency in organisational change research and these approaches underscore the significance of 'understanding' in the change process. Change researchers adopting interventionist approaches work from the premise that 'if organisational members can better understand how they construct themselves and their organisations, they will be better able to address their problems' (Barry, 1997, p.31). In working from this perspective, for example, a researcher is able 'to look at how change processes over time, to understand people's meanings, to adjust to new issues and ideas as they emerge, and to contribute to the evolution of new theories' (Easterby-Smith, Thorpe and Lowe, 2002, p.42).

The emphasis placed on understanding human actions and settings makes interpretive methods also very relevant to the concerns of professional practitioners, including policy makers (Murphy, Dingwall, Greatbatch, Parker and Watson, 1998). For example, they offer the ability to 'concentrate on exploring in much greater depth the nature and origins of people's viewpoints, or the reasons for, and consequences of, the choice of corporate performance criteria' (Easterby-Smith, *et. al.*, 2002, p.3).

Thus, the aim to understand management of organisational change through the meanings that employees assign to their activities and actions requires the adoption of interpretive assumptions and hermeneutic methods.

Role of Researcher and Reflexivity

The role of a researcher as an employee within an organisation and its resultant ethical implications are well documented in management research. The researcher's role 'may or may not be explicit and this will have implications for the extent to which he or she will be able to move around and gather information and perspectives from other people' (Easterby-Smith, *et al.*, 2002, p.110).

On the one hand, the empathy that develops as a result of direct personal contact with the research subject enables the researcher to 'understand the stance, position, feelings, experiences, and worldview of others' (Patton, 2002, p.52). On the other hand, the subjective nature of human perception raises doubt about the possibility of objectivity in this type of research. Therefore, for the research to be credible, the researcher should 'carefully reflect on, deal with, and report potential sources of bias and error' (Patton, 2002, p.51).

In qualitative inquiry, the researcher is required to be reflective by being 'attentive to and conscious of the cultural, political, social, linguistic, and ideological origins of one's own perspective and voices of those one interviews and those to whom one reports' (Patton, 2002, p.65). In keeping with this tradition, the author wishes to state that he has been an employee of PharmaCom for the past five years, and works as a project manager in the IS organisation of the company. In his current position, the author is responsible for managing all aspects (financial and human) of an offshore team in India with 12 computer programmer resources. Thus, the actual and perceived performance of this offshore team in India is directly linked to the performance of the author's job responsibilities, thereby indicating the author's potential vested interest in financial and other benefits (promotion, awards, recognition, etc.) associated with positive job performance.

Although the author immigrated to the United States more than 15 years ago and is now a United States citizen, he still maintains strong family and social ties with India, where he was born and raised. The author admits that he may have a personal bias that may be in

favour of the offshore outsourcing business model that brings the much-needed economic growth opportunities to India.

Furthermore, the offshore initiative at PharmaCom is currently being pursued on a pilot basis and consideration of its full-scale adoption will depend on the success of this pilot. The author currently plays an important role in the implementation of this pilot initiative and believes that his behaviour, attitude and actions may have an influence on the final outcome of the pilot project. The full-scale adoption of the offshore outsourcing business model by PharmaCom thus has a direct bearing on the future professional well being of the author.

There is probably no doubt that the bias and personal history would likely affect how the audience of this study would view the author's findings. Nevertheless, the author believes that the value that this study would provide in terms of rich and deep insights into the process of change management will outweigh any concerns about subjectivity.

Research Methods: Interpretive Case Study

Walsham (1993, p.14) argues that 'the most appropriate method for conducting empirical research in the interpretive tradition is the in-depth case study'. Robert Yin (1994, p.13) defines case study as 'an empirical study that investigates a contemporary phenomena within its real-life context especially when the boundaries between phenomenon and context are not clearly evident'. Case studies, with applicability across many disciplines including management, can be applied either to positivist, interpretive or critical approaches to research depending on the researcher's epistemology, although most case study researchers follow an interpretive orientation (Winegardner, 2001).

Strategy and Design

The main arguments for choosing case study for the author's research strategy are the descriptive nature of the research (not requiring control of behavioural events rather documenting them) and the dominance of 'how' and exploratory 'what' questions.

There are several methods and approaches to conduct case studies. For example, Yin (1994) has proposed the following typology: exploratory, descriptive and explanatory case studies. A descriptive design is appropriate for this study because the goal is to gain familiarity with a phenomenon and to provide readers a common language about the topic in question.

Case studies can be either single or multiple-case designs and regardless of their design, generalization of results is made to theory and not to populations (Yin, 1994).

The author will follow a single-case design for this study. Single cases are useful in confirming or challenging a theory, or in representing a unique or extreme case, according to Yin (1994). In addition, single case designs are very appropriate 'for revelatory cases where an observer may have access to a phenomenon that was previously inaccessible', however careful investigation is required to avoid misrepresentation (Tellis, 1997). In the context of this study, a single case design would permit an in-depth analysis of the IS organisation covering a large number of variables and allow a broad and detailed treatment of the dynamics of organisational change related to offshore outsourcing, thus yielding rich descriptions about a phenomenon that was previously inaccessible.

Yin (1994) maintains that case studies can be holistic or embedded, with embedded studies having multiple units of analysis within the same case study. For this study, the author will use an embedded case design because it presents opportunities for extensive analysis through the linking of behaviour of the focal unit of analysis (i.e. IS organisation) to the behaviour of a more disaggregated level of analysis (i.e. IS organisation's managerial hierarchy). Further, in order to enhance the insights into the single case an embedded design is necessary.

A general and frequent criticism of the case study method is that it does not lend itself well to generalization (Winegardner, 2001) because different researchers may interpret phenomena differently. Yin (2003, pp.32-33) has refuted this criticism with the following explanation: in analytic generalisation, 'a previously developed theory is used as a template with which to compare the empirical results of the case study'. Further, from the author's standpoint, generalization is not the objective but discovering 'the details of the situation to understand the reality or perhaps a reality working behind them' (Saunders, *et al.*, 2003, p.84). Despite the criticism, case study continues to be a popular choice, as evidenced in the literature, amongst researchers in various academic disciplines.

Sampling

A purposeful sampling strategy will be employed for this study. With this strategy, it is possible to select information rich cases for in-depth study. 'Information-rich cases are those from which one can learn a great deal about issues of central importance to the purpose of the inquiry' (Patton, 2002, p.230).

The sampling technique that will be employed is maximum variation sampling. This technique allows 'capturing and describing the central themes that cut across a great deal of variation', and 'any common patterns that emerge from great variation are of particular interest and value in capturing the core experiences and central, shared dimensions of a setting or phenomenon (Patton, 2002, pp.234-35). In order to capture maximum variation, the study sample will be drawn from all three hierarchical levels of the IS organisation: leadership (i.e. members of the OT), middle managers, and non-managerial employees (see Table). Further, this sample will be drawn in such a way that it represents the different organisational subunits of the PharmaCom IS organisation which have fully participated in the change initiative, namely R&D IS, Sales & Marketing IS, and the three support groups. It must be noted that the Manufacturing and Finance & Administration BSUs did not actively participate in the change initiative and therefore will be excluded from the sample. Such a sample will not only ensure maximum variation within the IS organisation but will also help describe the uniqueness of each hierarchical level as well as capture themes across hierarchies. 'Any such themes take on added importance precisely because they emerge out of great variation' (Patton, 2002, p.235).

Proposed Sampling Parameters:

Managerial level	***Sample size (N)***
Leadership (member of OT)	6
Middle Manager	6
Non-managerial employees	6
Total	**18**

Data Collection

Yin (1994) has identified six sources of data for case study research. They are: documentation, archival records, interviews, direct observation, participant observation, and physical artefacts. While no single data source has a complete advantage over the others, they are meant to complement each other and can be used in tandem. According to Lindlof (1995), multiple methods are useful in examining communicative events from different perspectives.

The author intends to use interviews, direct observation and document analysis as the sources of data for this study. Interviews will serve as the primary source of data, while direct observation and document analysis will serve as supplemental sources. In order to avoid any potential gatekeeper issues, in December 2004, the author made the management team and key staff members of the case organisation aware of the purpose, intentions and timelines of the author's engagement in data collection and related research activities.

The author will store and organise all data collected for this study in a computer database system for easy access and retrieval. For those documents that cannot be stored electronically, the author will maintain a paper copy. Furthermore, the author intends to fully leverage the data and findings from the pilot study conducted in early 2005 as part of the ABRM assignment.

Interviews

Tellis (1997) asserts that interviews are one of the most important sources of case study information. The empirical data for this study will be mainly gathered through semi-structured open-ended interviews with staff members from three hierarchical levels of the IS organisation: leadership (i.e. members of OT), middle management, and non-managerial employees. A questionnaire, with questions structured around the theoretical framework of this study, will guide each interview. The interviews will be tape-recorded with the permission of the participants. If a participant denies permission for some reason, the interview will not be tape-recorded but interview notes taken. The author will then transcribe the interviews using a standard word processing programme, and a copy of the typed transcript will be provided to the participants for review to ensure accuracy and completeness of information. The author plans to complete all the interviews between September and December of 2005.

Direct Observation

Direct observation of staff participation in the change initiative will also be an important aspect of data collection. Direct observation has several advantages: the researcher is able to 'understand and capture the context within which people interact', and the researcher 'has the opportunity to see things that may routinely escape awareness among the people in the setting' (Patton, 2002, p.262). Because of time constraints, the author will limit the observation to activities that are central to answering the research questions. Thus,

observations will be made overtly at the weekly staff meetings (1-hour duration) of the offshore programme and at the less frequent ad hoc meetings that are called to address specific issues related to the offshore programme. The observations will focus on the environment in which the participants (of the offshore programme) operate and the interrelationships between the participants. To the extent possible, the author will assume the role of a complete observer, although this will be difficult given that the author himself is an employee of the IS organisation. The author will record his observations as field notes in an electronic journal. These field notes, because of their sheer volume, will not be shared with the participants. The author commenced direct observation activities of the change initiative in December 2004 following the completion of Block 3 of the DBA programme and will continue the observation until the end of the data collection phase in June 2006.

Document Analysis

In organisational fieldwork, documents can provide important information about many things that cannot be observed, including things that took place before the research began (Patton, 2002). The author, as a staff member of the PharmaCom IS organisation, has access to several company sources that house a variety of documents related to the change initiative under study. These documents include budget and financial records, meeting minutes, standard operating procedures, study and assessment reports of various kinds, electronic mail, request for proposals, organisational charts, resource allocation plans, strategy documents, among others. Such documents will not only provide a good source of basic information, but will be necessary to ensure that important data is not overlooked. The author started document analysis in December 2004 and has been storing and organising the documents in a computer system for easy retrieval.

Data Analysis and Reporting

In qualitative research, data collection and analysis can proceed concurrently. This overlapping 'improves both the quality of data collected and the quality of the analysis' (Patton, 2002, p.437). With this strategy, any gaps identified during the analysis, can be addressed with additional data collection, if necessary.

The empirical data will be segmented, coded using the open coding method (Strauss and Corbin, 1998), and sorted into categories using the constant comparison method until theoretical saturation is reached. Further, analytical memos, with descriptions of closely

related concepts found in the literature, will be created. The author will use the NUD*IST code-based qualitative analysis software (N6 version) for coding.

The analysis for this study will proceed through a two-stage process. In the first round of analysis, an inductive, grounded theory approach (Glaser and Strauss, 1967), along with hermeneutical principles of interpreting texts, will be employed to analyse interview data and observation notes. This will allow the emergence of categories (e.g. themes, concepts) representing the phenomenon and the subsequent development of a theoretical framework that explains the phenomenon under study. Organisational documents will be used mainly to obtain convergence of evidence (triangulation).

The second round of analysis (i.e. within case analysis) will involve applying the concepts discussed in the literature review to the theory constructs developed during the first round. The author's theory constructs will be examined in light of two or three key change management theories/models (e.g. Dawson's framework), especially looking at the ways in which the case supports or challenges these theories/models.

The reporting for this study will follow the 'classic single-case study' format (Yin, 2003), where a single narrative will be used to describe and analyse the case. The case study report will be structured as linear-analytic, which is suitable for descriptive case studies (Yin, 2003). This structure 'is the most advantageous when research colleagues or a thesis or dissertation committee comprises the main audience for a case study' (Yin, 2003, p.153).

Criteria for Evaluation

Unlike positivist research, research in the interpretive tradition is assessed in terms of trustworthiness criteria, which includes credibility, transferability, dependability, and confirmability (Lincoln and Guba, 1985). In general, trustworthiness is enhanced with prolonged data collection, data triangulation, minimisation of researcher biases, and mapping what works within the boundaries and limitations of the study (Denzin, 1978; Lincoln and Guba, 1985).

The author will use multiple sources of data as a form of triangulation, engage in prolonged data gathering on site, and conduct member checks by having the draft case report reviewed by key interview participants in order to bolster confirmability (construct validity) and credibility (internal validity). Further, within-case analysis, along with tying propositions to existing literature, will ensure transferability (external validity). Finally,

the dependability (reliability) of this research study can be examined and ascertained with the case study database.

Ethical Concerns

This study will adhere to the ethical standards stated in the university's policy document. The ethical concerns of the proposed research revolve around three main areas: informed consent, confidentiality, and potential harm to participants. The author has already obtained permission from the management of PharmaCom's IS organisation to engage in data collection and related research activities. In order to address the ethical concern of informed consent, the author will either verbally or through email describe the objectives and purpose of the study when approaching a potential interview participant for the first time. If the participant agrees to be interviewed, the author will provide a consent form prior to the interview, which the participant will be asked to read and sign. If the participant expresses any reservations about signing the form, no signature will be obtained and consent instead will be treated as implied in the agreement to participate in the interview.

The author will assign pseudonyms to both the interview participants as well as the case organisation to protect anonymity. Further, those organisational subunits that have unique names will be given generic names to ensure confidentiality (e.g. the Commercial Operations division will be referred to as the Sales and Marketing division).

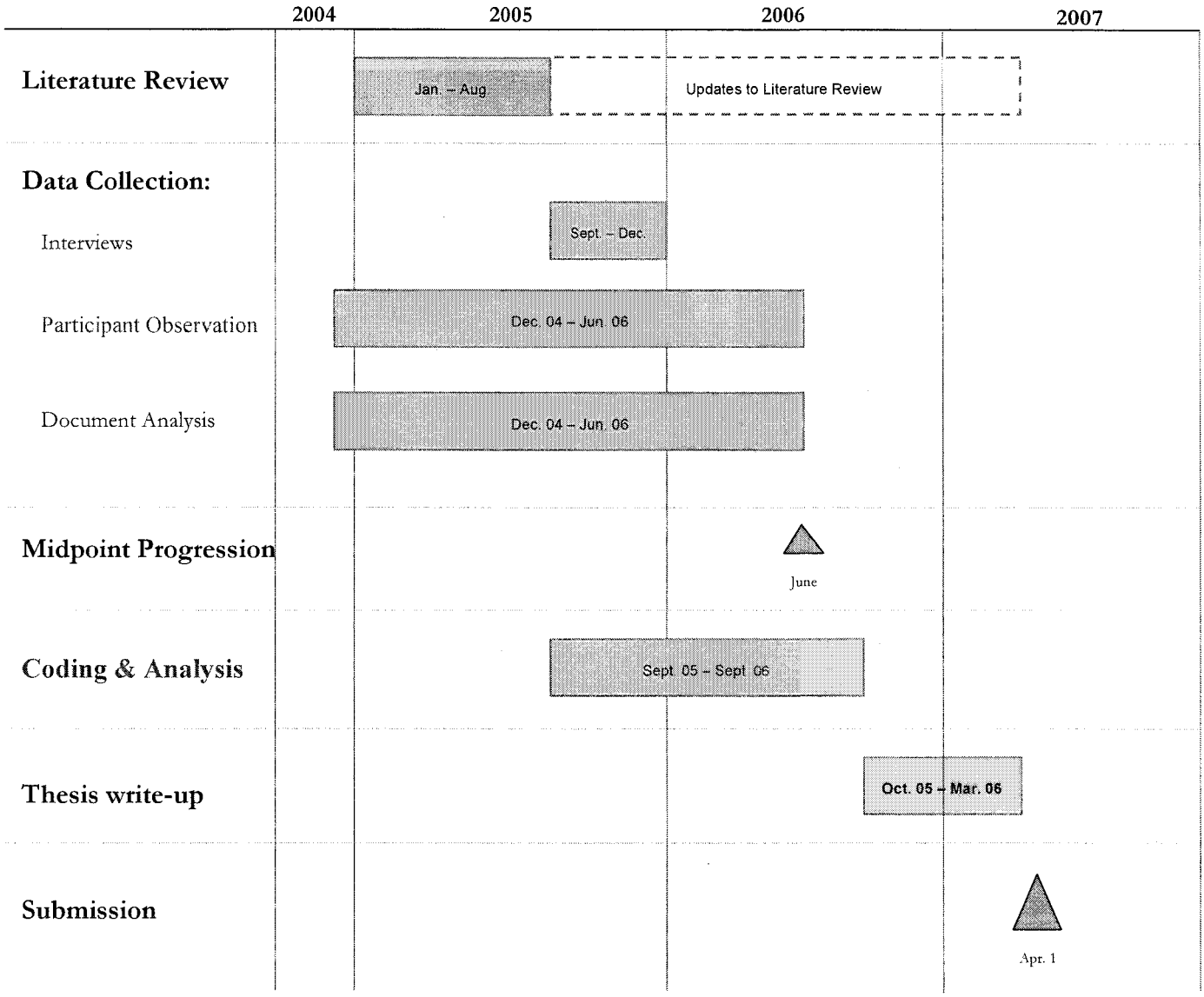
Finally, the author will take necessary steps to minimise potential harm to the interview participants from either the research process or findings, including the non-release of such data analyses into the public domain that would cause damage or harm to the participants.

Relevance to Professional Practice

The author's research has practical implications for individuals and organisations in terms of managing change associated with offshore outsourcing of IT projects. In particular, it will help organisations manage change more effectively by providing new insights in key areas such as communication, cross-cultural differences, resource management, performance management, project/programme management, and sourcing strategies. These insights will help companies to devise more effective change management strategies and practices as well as help create better partnerships with their external

service providers, ultimately resulting in increased corporate performance and productivity.

Research Timelines



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Appendix I: Informed Consent Form

Northumbria University, Newcastle-upon-Tyne, UK

Interview Consent Form

I, **T.R. RAMANATHAN**, am a doctoral student in Business Administration and am conducting a research study about the offshore IT initiative currently being implemented in our company. The purpose of this study is to understand how organisational change related to offshore outsourcing of IT services is managed in a multinational company. This study will be an integral part of the doctoral programme requirements, which I am pursuing at Northumbria University.

Towards that end, I am requesting your permission to interview you to ascertain your views on change management and, more specifically, your understanding of the dynamics of change on the IT department. The interview should not take more than 45 minutes to an hour of your time.

All information you provide will be treated in a confidential manner and neither you nor the name of our company will be identified by name in the final thesis.

Please feel free to ask me any questions before signing this form, and you can keep a copy of this for your records if you wish. If you need further information about this study, you may please contact my research supervisor, Dr. Nigel van Zwanenberg, Newcastle Business School, Northumbria University, via email at nigel.zwanenberg@unn.ac.uk or telephone at 0191 227 4490.

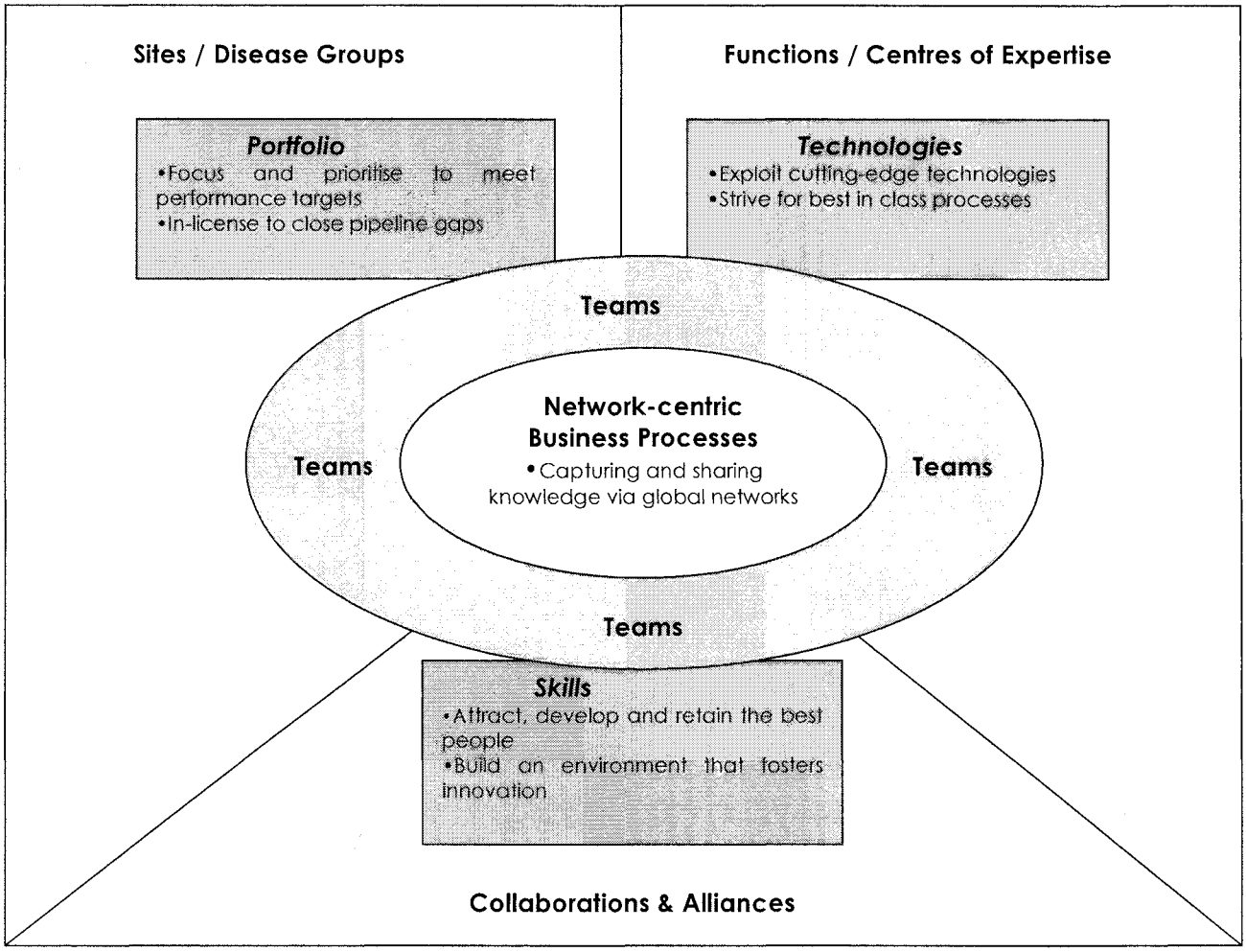
Thank you for your time and consideration.

By signing below, you agree to participate in the study that has been described above.

Interviewee's Name: _____ **Interviewee's Signature:** _____

Interviewer's Name: T.R. Ramanathan **Today's Date:** _____

Appendix J: R&D Strategy



Appendix K: Offshore Vendor Selection Criteria

Company:

- Vision and direction
- Company stability
- Size
- Location: onshore / near shore / offshore
- Security
- Organisational culture

Technology:

- Project management
- Software development process
- Quality process

Human Resources:

- Skill sets
- People quality
- Retention rate

Appendix L: Offshore Development Centre Governance Model